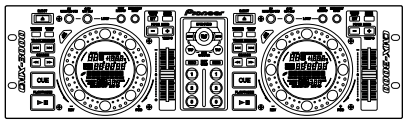
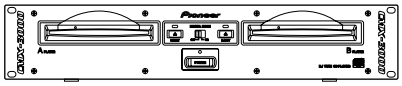
Pioneer sound.vision.soul

Service Manual


CU-V163


CMX-3000

ORDER NO.
RRV2537

COMPACT DISC PLAYER
CMX-3000
REMOTE CONTROLLER
CU-V163

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model		Power Requirement	Remarks
	CMX-3000	CU-V163		
KUCXJ	○	-	AC120V	
WYXJ	○	-	AC220- 240V	
RLBXJ	○	-	AC110-120V/ 220-240V	
——	-	○	DC Power supply from other system	

CONTENTS

1. SAFETY INFORMATION ····· 2
2. EXPLODED VIEWS AND PARTS LIST ····· 5
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM 12
4. PCB CONNECTION DIAGRAM ····· 35
5. PCB PARTS LIST ····· 50
6. ADJUSTMENT ····· 55
7. GENERAL INFORMATION ····· 57
7.1 DIAGNOSIS ····· 57
7.1.1 SERVICE MODE ····· 57
7.1.2 STARTING SEQUENCE ····· 62
7.1.3 DISASSEMBLY ····· 63
7.2 PARTS ····· 68
7.2.1 IC ····· 68
8. PANEL FACILITIES AND SPECIFICATIONS ····· 82

For details, refer to "Important symbols for good services" on **"service information"**.

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1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

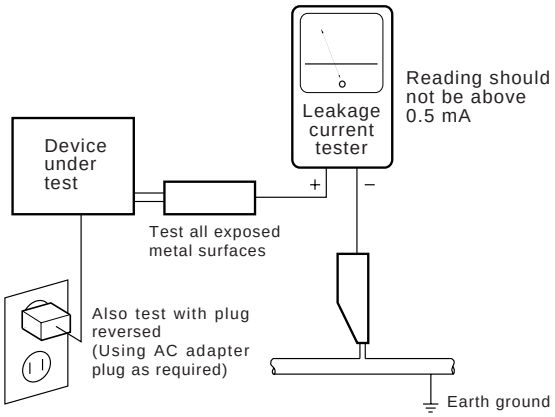
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.


Leakage current tester
Reading should not be above 0.5 mA
Device under test
+
–
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage , etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

IMPORTANT

THIS PIONEER APPARATUS CONTAINS LASER OF CLASS 1.
SERVICING OPERATION OF THE APPARATUS SHOULD BE DONE BY A SPECIALLY INSTRUCTED PERSON.

LASER DIODE CHARACTERISTICS

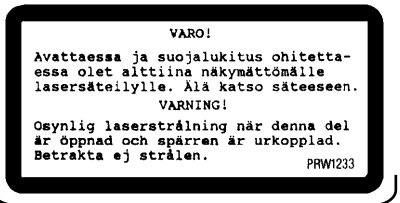
MAXIMUM OUTPUT POWER: 5 mW
WAVELENGTH: 780 – 785 nm

WARNING !

The AEL(accessible emission level) of the laser power output is less then **CLASS 1** but the laser component is capable of emitting radiation exceeding the limit for **CLASS 1.**
A specially instructed person should servicing operation of the apparatus.

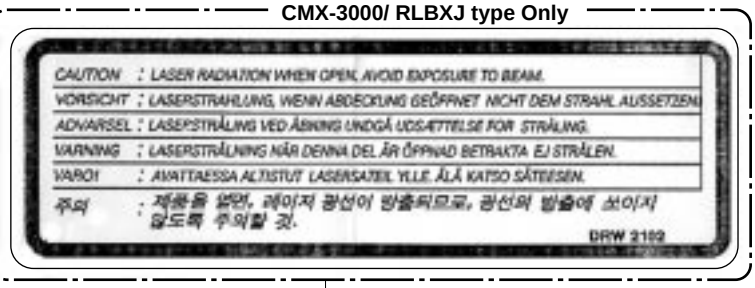
LABEL CHECK

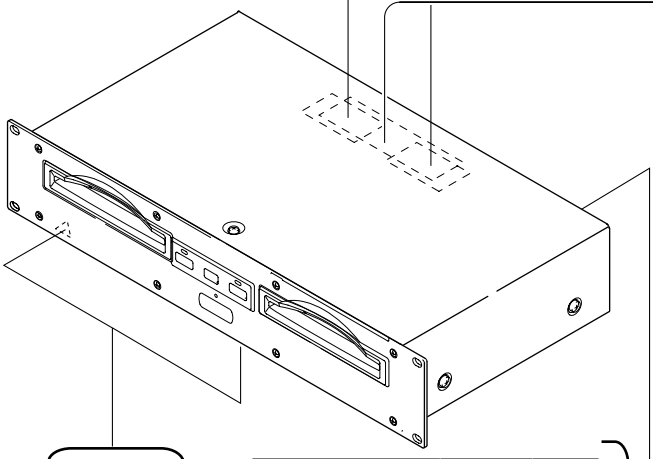
CMX-3000/ WYXJ type Only


VARO!
Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.
VARNING!
Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.
PRW1233

ADVARSEL
USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHED SAFBRYDERE ER UDE AF FUNKTION.
UNDGÅ UDSÆTTELSE FOR STRÅLING.
VORSICHT!
UNSICHTBARE LASER-STRAHLUNG TRITT AUS, WENN DECKEL (ODER KLAPPE) GEÖFFNET IST! NICHT DEM STRAHL AUSSETZEN!
VRW1094

CMX-3000/ RLBXJ type Only


CAUTION : LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
VORSICHT : LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN!
ADVARSEL : LASERSTRÅLING VED ÅBNING UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARNING : LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD BETRAKTA EJ STRÅLEN.
VARO! : AVATTAESSA ALTISTUT LASERSÄTEIL YLLE. ÄLÄ KATSO SÄTEESEEN.
주의 : 제품을 열면, 레이저 광선이 방출되므로, 광선의 방출에 쏘이지 않도록 주의할 것.
DRW 2102



CMX-3000/ KUCXJ type Only

Printed on the Rear Panel.

Additional Laser Caution

1. Laser Interlock Mechanism
   The position of the switch (S801,S901) for detecting loading completion is detected by the system microprocessor, and the design prevents laser diode oscillation when the switch is not in $\overline{\text{LPS1}}$ terminal side (when the mechanism is not clamped and $\overline{\text{LPS1}}$ signal is high level.) Thus, the interlock will no longer function if the switch is deliberately set to $\overline{\text{LPS1}}$ terminal side. (if $\overline{\text{LPS1}}$ signal is low level).
   In the test mode* the interlock mechanism will not function. Laser diode oscillation will continue, if pin 9 of TA2153FN (IC1010, IC1003) on the MAIN ASSY is connected to GND, or pin 10 of IC1010, IC1003 ($\overline{\text{LDON}}$) is connected to low level (ON), or else the terminals of Q1003, Q1229 are shorted to each other (fault condition).
   Note: S801, IC1010 and Q1003 (Player A Side)
   S901, IC1003 and Q1229 (Player B side)
2. When the cover is opened, close viewing of the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

* : Refer to page 55.

■ SERVICE INFORMATION

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

[NOTES ON SERVICING]

■ CLEARNING

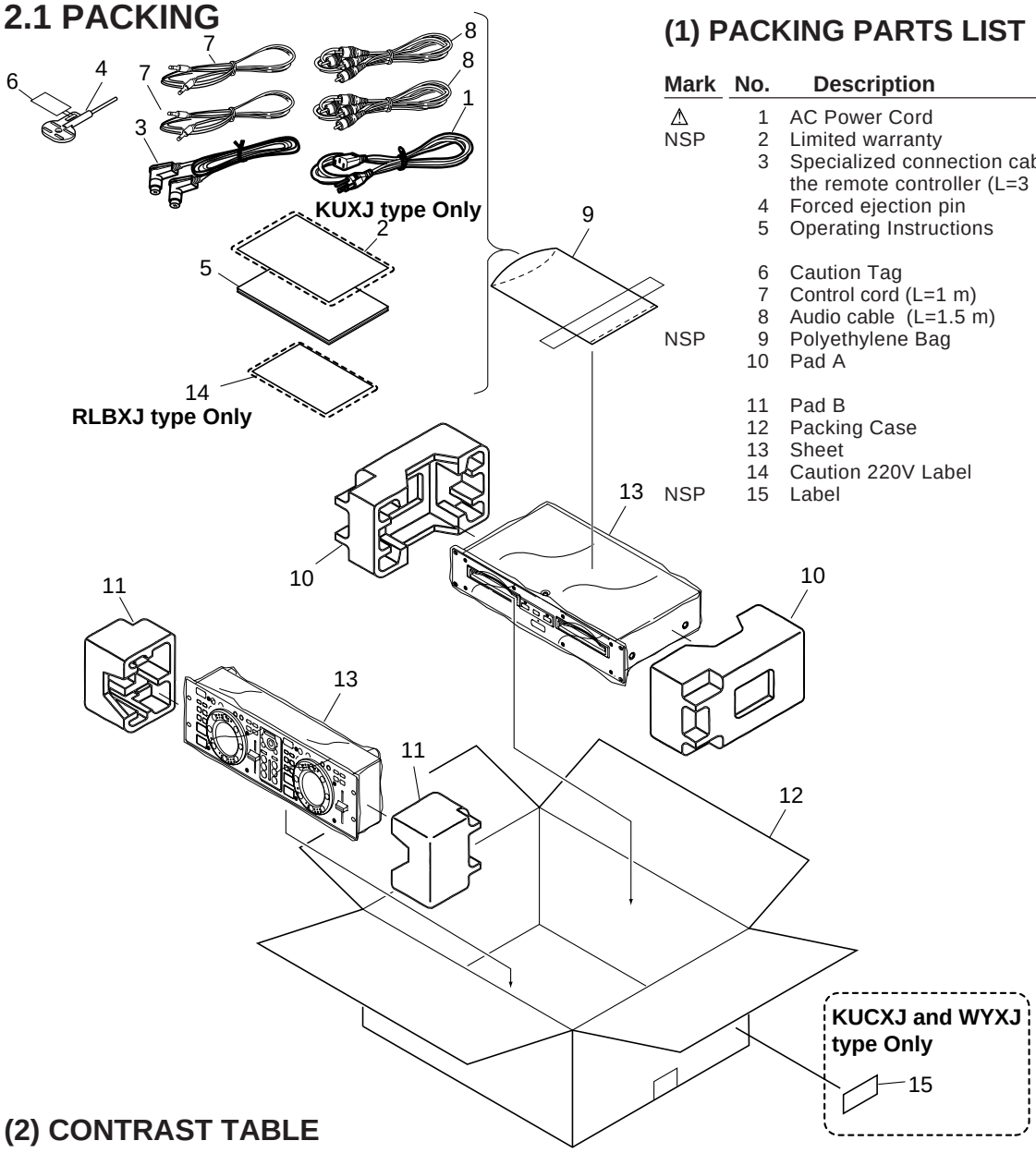
Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	Cleaning tools
Pickup leneses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on the product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING



(1) PACKING PARTS LIST

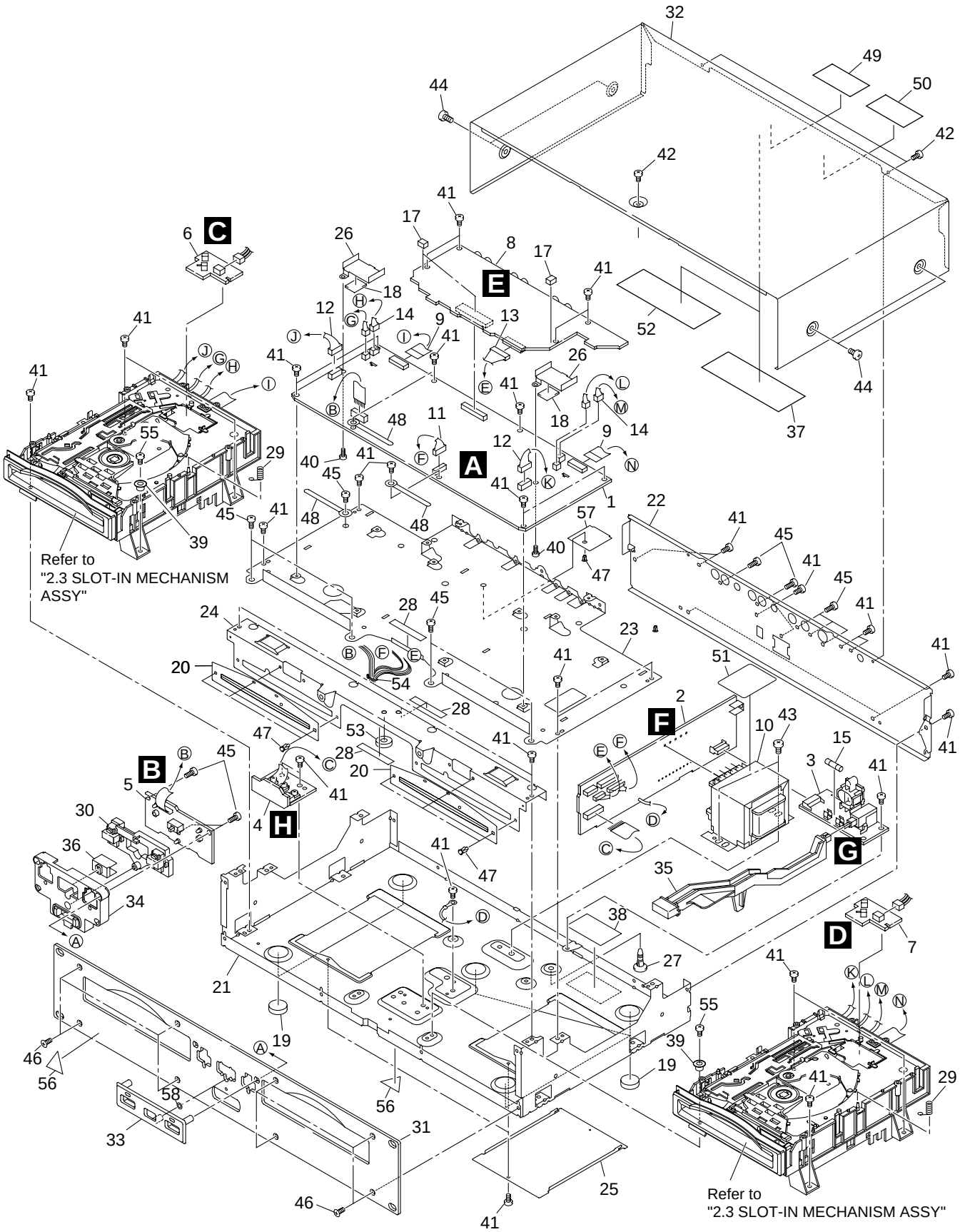
Mark	No.	Description	Part No.
⚠	1	AC Power Cord	See Contrast table (2)
NSP	2	Limited warranty	See Contrast table (2)
	3	Specialized connection cable for the remote controller (L=3 m)	DDE1122
	4	Forced ejection pin	DEX1013
	5	Operating Instructions	See Contrast table (2)
	6	Caution Tag	DRW1897
	7	Control cord (L=1 m)	PDE1267
	8	Audio cable (L=1.5 m)	VDE1064
NSP	9	Polyethylene Bag	Z21-038
	10	Pad A	DHA1529
	11	Pad B	DHA1530
	12	Packing Case	See Contrast table (2)
	13	Sheet	RHX1006
	14	Caution 220V Label	See Contrast table (2)
NSP	15	Label	See Contrast table (2)

(2) CONTRAST TABLE

CMX-3000/KUXJ, WYXJ and RLBXJ are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No.			Remarks
			KUCXJ Type	WYXJ Type	RLBXJ Type	
⚠	1	AC Power Cord	ADG7022	ADG1154	ADG1154	
NSP	2	Limited warranty	ARY7043	Not used	Not used	
	5	Operating Instructions (English)	DRB1307	Not used	Not used	
	5	Operating Instructions (English/ French/ German/ Italian/ Dutch/ Spanish)	Not used	DRB1306	Not used	
	5	Operating Instructions (English/ Spanish/ Chinese)	Not used	Not used	DRB1308	
	12	Packing Case	DHG2160	DHG2158	DHG2161	
	14	Caution 220V Label	Not used	Not used	ARR1003	
NSP	15	Label	VRW1629	VRW1629	Not used	

2.2 EXTERIOR SECTION



(1) EXTERIOR SECTION PARTS LIST

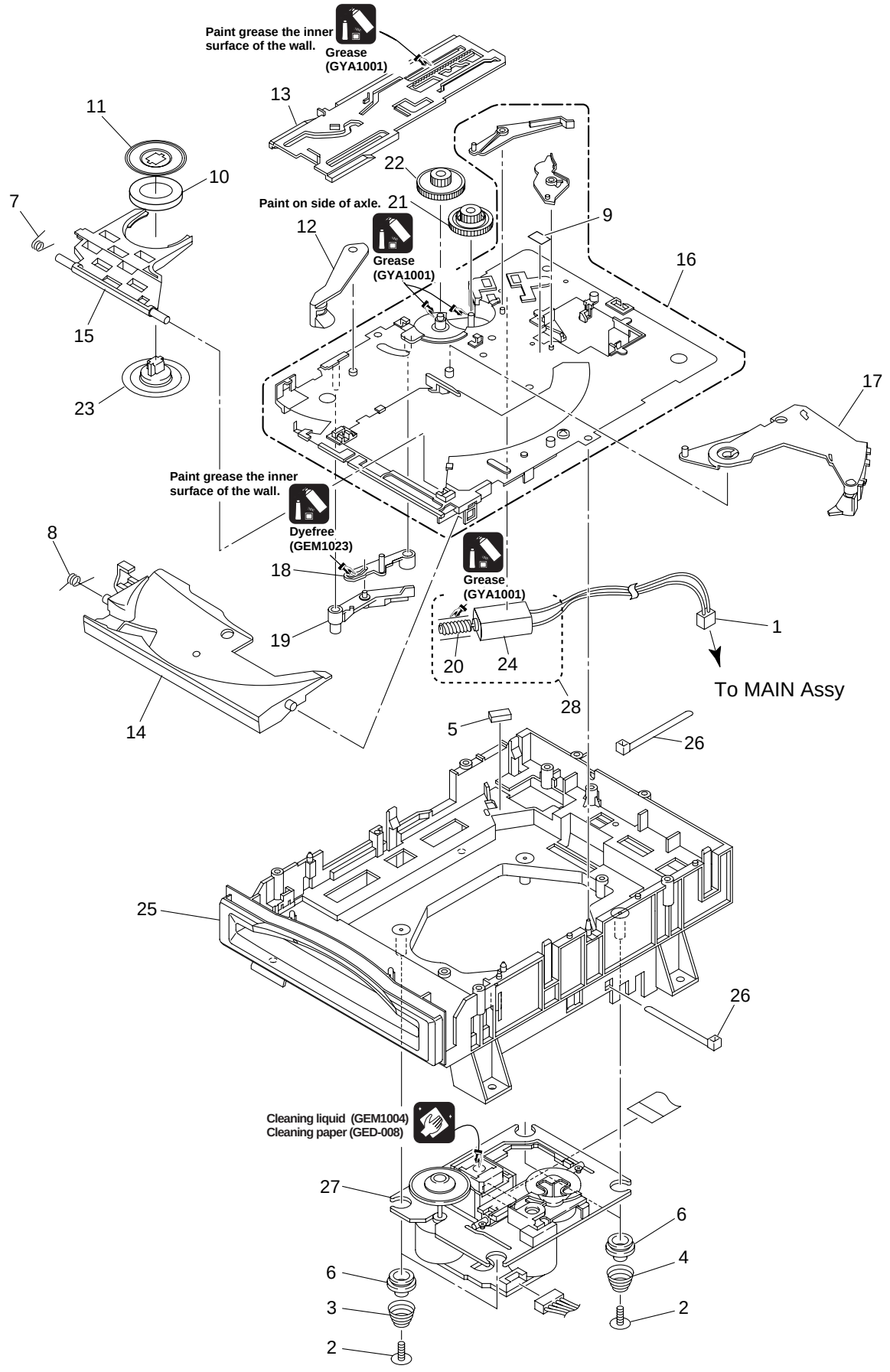
Mark	No.	Description	Part No.
	1	MAIN ASSY	DWG1556
	2	PWRB ASSY	See Contrast table (2)
	3	ACIN ASSY	See Contrast table (2)
	4	REGB ASSY	See Contrast table (2)
	5	FRSW ASSY	DWS1314
	6	SLM1 ASSY	DWS1315
	7	SLM2 ASSY	DWS1316
	8	JACB ASSY	See Contrast table (2)
	9	Leadcard 16p	DDD1194
⚠	10	Power Transfomer	See Contrast table (2)
	11	Connector Ass'y	PF05FE-D17
	12	Connect0r Ass'y (6p)	PF06PP-B47
	13	Connector Assy	PF09EE-D25
	14	Connector Ass'y	PG03KK-E15
⚠	15	Fuse (FU101)	See Contrast table (2)
	16	• • • • •	
	17	Rubber Spacer	DEB1455
NSP	18	Silicon Rubber D5 L	DEB1456
	19	Insulator	DEC2348
	20	Front Sheet B	DEC2467
NSP	21	Chassis	DNA1277
	22	Rear Panel	See Contrast table (2)
	23	PCB Frame	DNH2502
	24	Panel Stay	DNH2503
	25	Bottom Plate	DNH2505
	26	Heat Sink	DNH2508
	27	Locking Card Spacer	VEC1596
	28	Sheet	DED1159
	29	Earth Spring	DBH1398
	30	Eject Knob	DEB1503
	31	Front Panel	DNB1098
	32	Bonnet Case	DNE1409
	33	Function Panel	DNK3944
	34	Power Knob Caver	DNK3945
	35	Power Knob	DNK3946
	36	Slide SW Knob	DNK3947
	37	65 Label	See Contrast table (2)
NSP	38	Label	VRW-548
	39	POM Bush (M3)	DEC2397
	40	Screw	BBZ26P060FMC
	41	Screw	BBZ30P060FMC
	42	Screw	BBZ30P060FZK
	43	Screw	BBZ40P060FMC
	44	Screw	BBZ40P060FZK
	45	Screw	BPZ30P080FZK
	46	Screw	CBZ30P080FZK
	47	Rivet (Plastic)	RBM-003
	48	Cord Clamper (Steel)	RNH-184
	49	Caution Label HE	See Contrast table (2)
	50	Caution Label	See Contrast table (2)
	51	Trans Sheet	DEC2280
	52	Caution Label	See Contrast table (2)
	53	Screw Guard	DEB1447
	54	Binder	ZCA-SKB90BK
	55	Screw	BBZ30P080FMC
NSP	56	Caution Label	See Contrast table (2)
	57	Protect Sheet	See Contrast table (2)
	58	Spacer (PEE)	DEC2470

(2) CONTRAST TABLE

CMX-3000/KUXJ, WYXJ and RLBXJ are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No.			Remarks
			KUCXJ Type	WYXJ Type	RLBXJ Type	
	2	PWRB ASSY	DWR1345	DWR1345	DWR1348	
	3	ACIN ASSY	DWR1349	DWR1346	DWR1346	
	4	REGB ASSY	DWR1357	DWR1347	DWR1347	
	8	JACB ASSY	DWX2214	DWX2200	DWX2200	
⚠	10	Power Transfomer (AC120V)	DTT1161	Not used	Not used	
⚠	10	Power Transfomer (AC220-240V)	Not used	DTT1160	Not used	
⚠	10	Power Transfomer (AC110-120V/220-240V)	Not used	Not used	DTT1162	
⚠	15	Fuse (FU101: 1.6A)	REK1077	Not used	Not used	
⚠	15	Fuse (FU101: 1.0A)	Not used	REK1022	REK1022	
	22	Rear Panel	DNC1586	DNC1585	DNC1587	
	37	65 Label	ARW7050	Not used	Not used	
	49	Caution Label HE	Not used	PRW1233	Not used	
	50	Caution Label	Not used	VRW1094	Not used	
	52	Caution Label	Not used	Not used	DRW2102	
NSP	56	Caution Label	DRW1975	Not used	Not used	
	57	Protect Sheet	Not used	DEC2466	DEC2466	

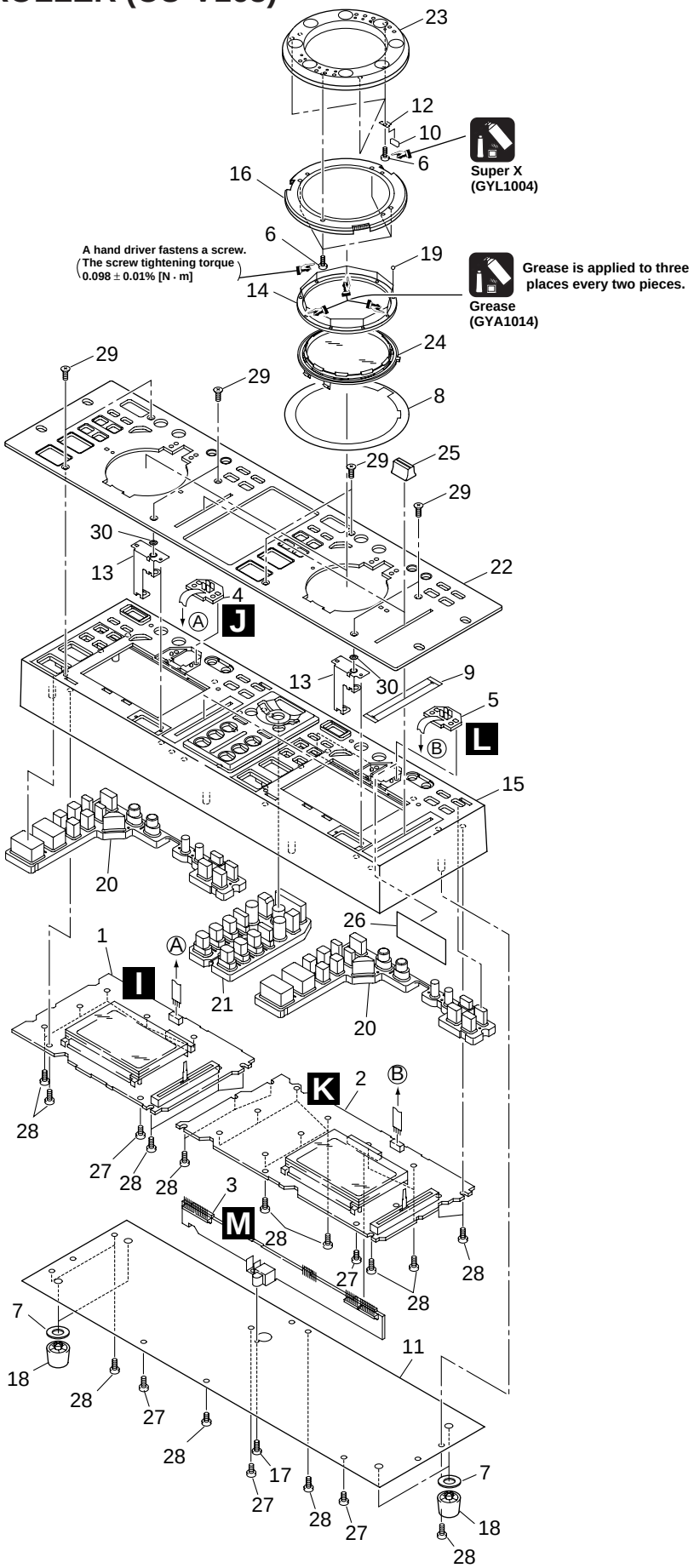
2.3 SLOT-IN MECHANISM SECTION



● SLOT-IN MECHANISM SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Connector Ass'y	DKP3565
	2	Float Fastener	DBA1139
	3	Float Spring F	DBH1491
	4	Float Spring R	DBH1492
	5	Spacer Por (T3)	DEB1467
	6	Float Rubber	DEB1506
	7	Clamp Spring	DBH1374
	8	Guide Spring	DBH1375
	9	Sw.Lever Spacer (Pet)	DEC2420
	10	Clamp Magnet	DMG1008
	11	Yoke	DNH2504
	12	Loading Lever	DNK3406
	13	Main Cam	DNK3407
	14	Disc Guide	DNK3478
	15	Clamp Arm	DNK3576
	16	Loading Base Assy-S	DEA1022
	17	Eject Lever	DNK3684
	18	Lever AP	DNK3835
	19	Lever BP	DNK3836
NSP	20	Worm Gear	DNK3410
	21	Loading Gear	DNK3409
	22	Drive Gear	DNK3565
	23	Clamper	DNK3949
NSP	24	Loading Motor	DXM1173
	25	Mecha Base	DNK3948
	26	Binder	ZCA-SKB90BK
	27	CD Mechanism	DA11T3CNPIO
	28	Loading Motor Assy-S	DXX2510

2.4 REMOTE CONTROLLER (CU-V163)

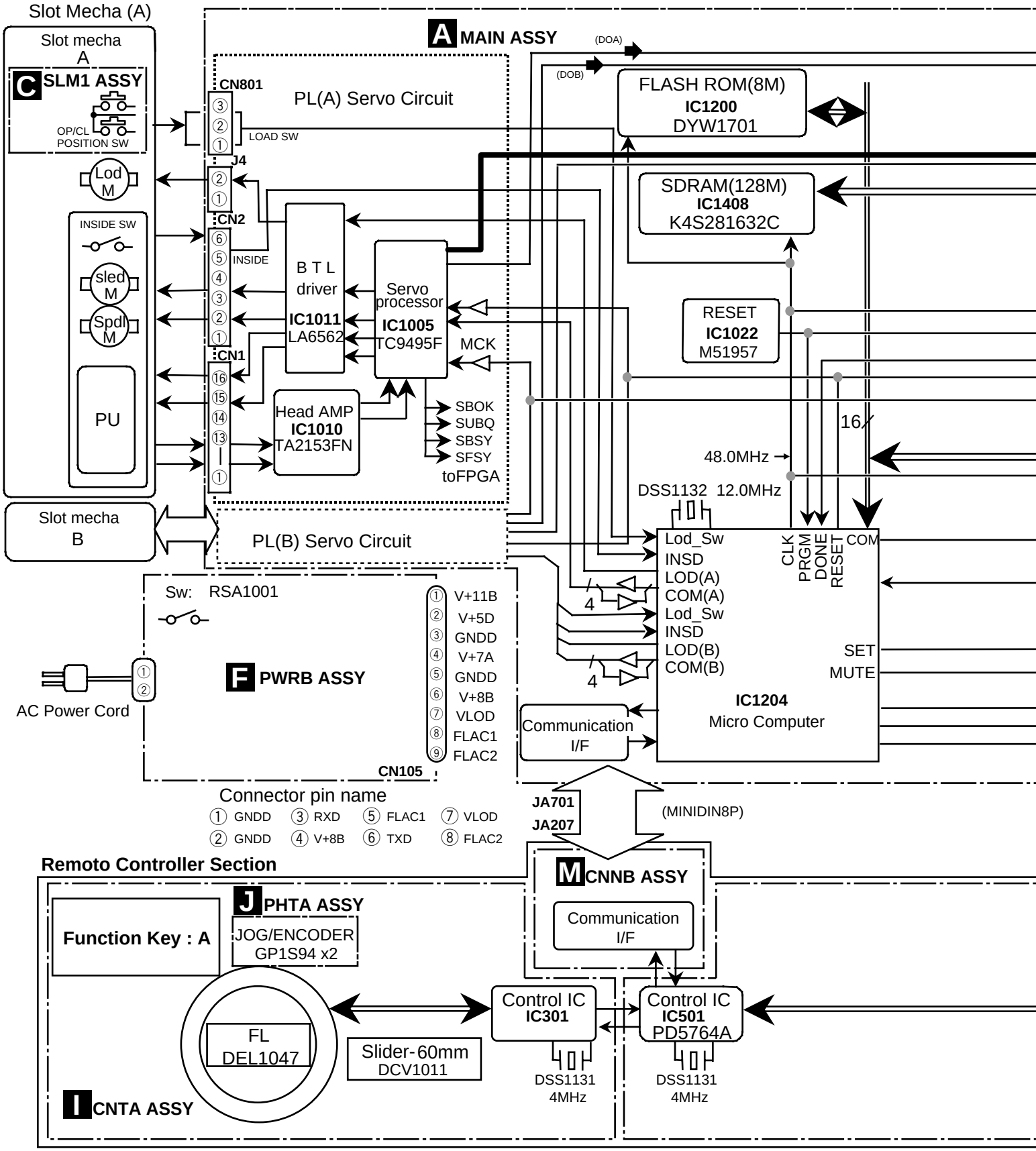


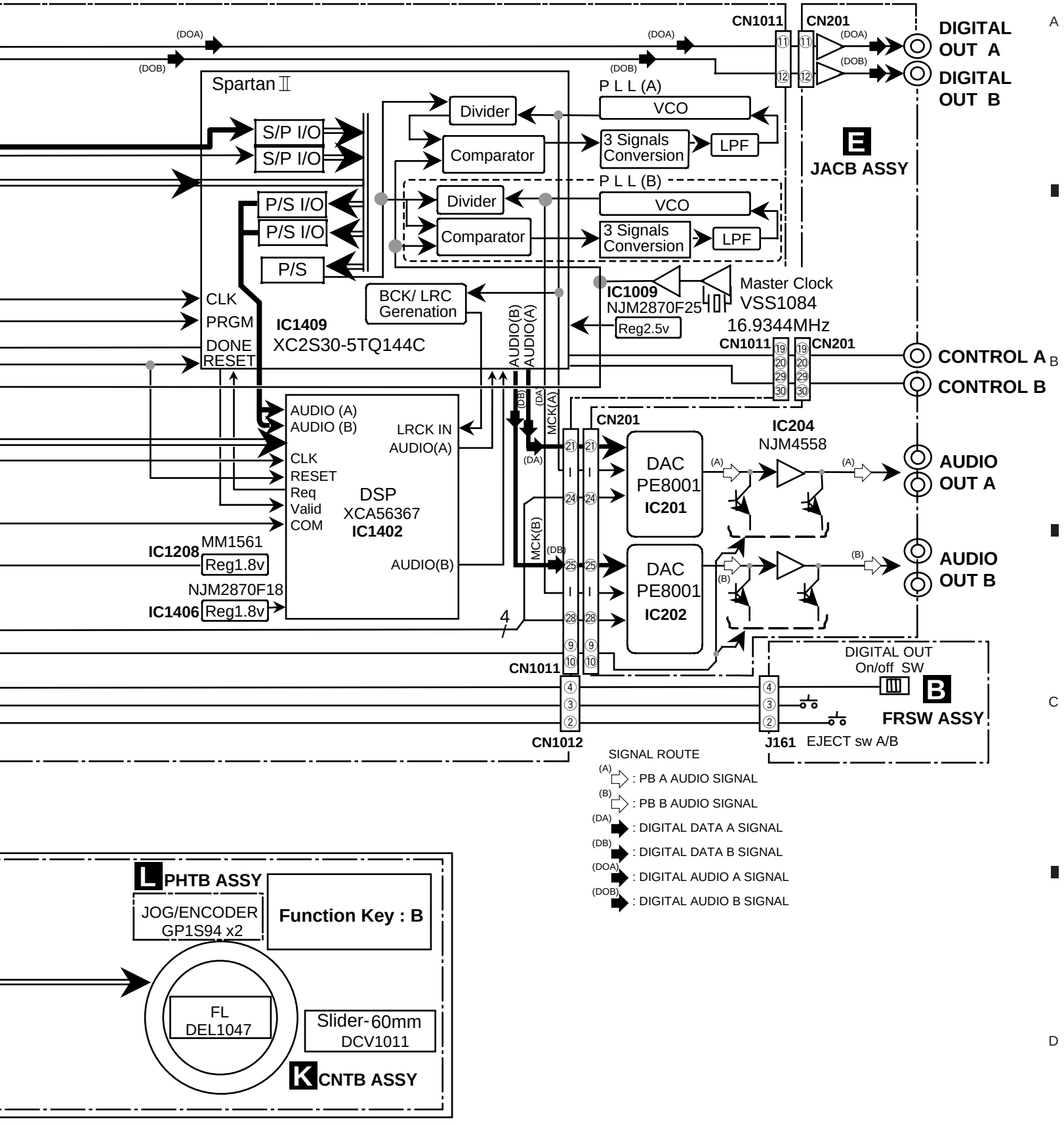
● REMOTE CONTROLLER (CU-V163) PARTS LIST

Mark	No.	Description	Part No.
	1	CNTA ASSY	DWG1551
	2	CNTB ASSY	DWG1552
	3	CNNB ASSY	DWG1553
	4	PHTA ASSY	DWG1554
	5	PHTB ASSY	DWG1555
	6	Screw	ABA7022
	7	CR Spacer	DEB1524
	8	Jog Sheet A	DEC2468
	9	Slide VR Packing	DED1157
	10	J Magnet	DMG1006
	11	Rear Panel	DNC1590
	12	Magnet Stay	DNF1668
	13	Earth Plate	DNH2506
	14	Retainer	DNK3952
	15	Panel Base	DNK3953
	16	Jog Ring	DNK3954
	17	Screw (Steel)	PBA1096
	18	Foot (Rubber)	REC1263
	19	Steel Ball	VNX1006
	20	Select Knob 1	DEB1504
	21	Select Knob 2	DEB1505
	22	Control Panel	DNB1099
	23	Jog Dial	DNK3950
	24	Display Plate	DNK3951
	25	Slide Knob	DNK3955
	26	65 Label	ARW7050
	27	Screw	BBZ30P060FMC
	28	Screw	BPZ30P080FZK
	29	Screw	CBZ30P080FZK
	30	Washer	WH30FUC

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

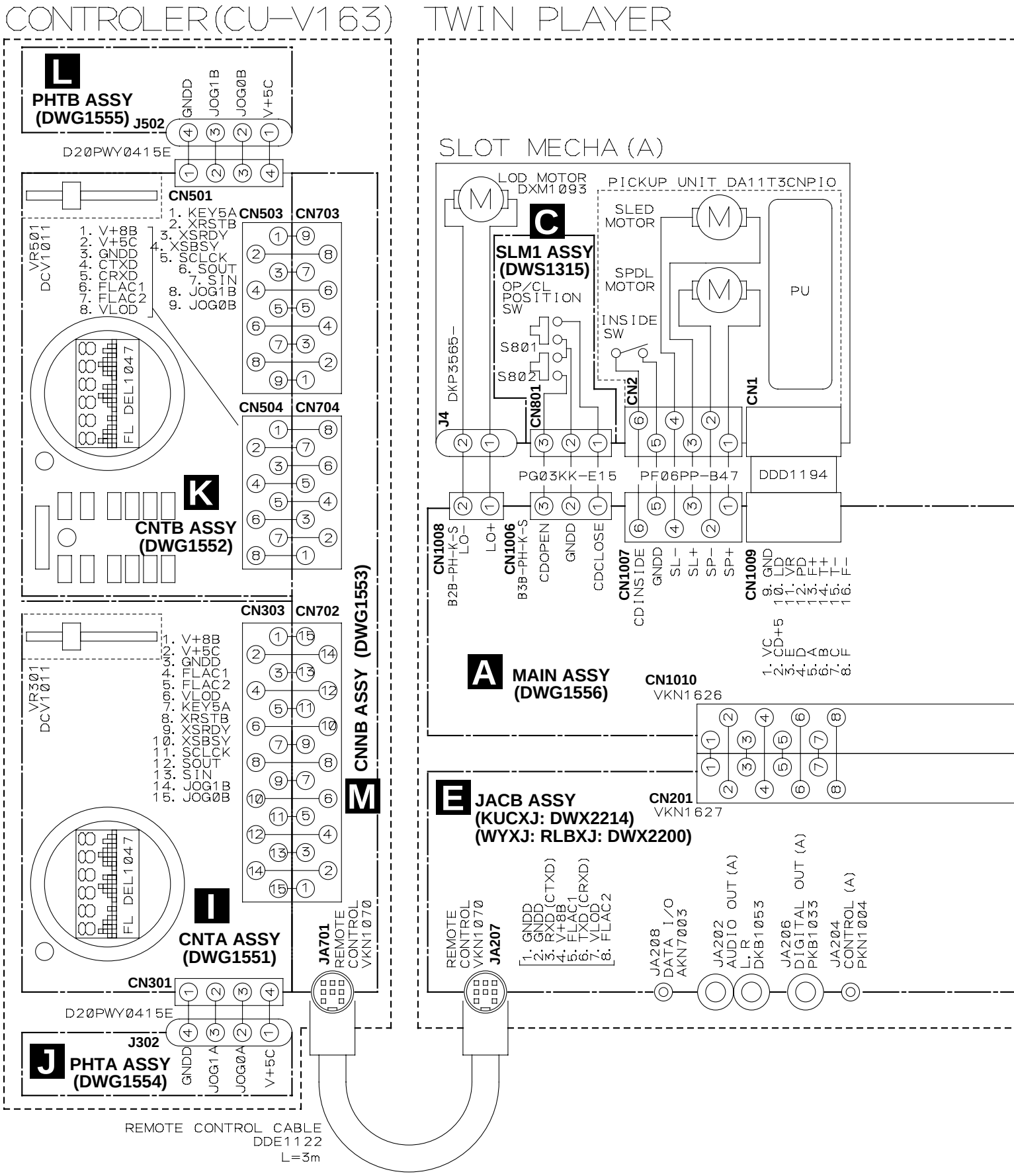
3.1 BLOCK DIAGRAM



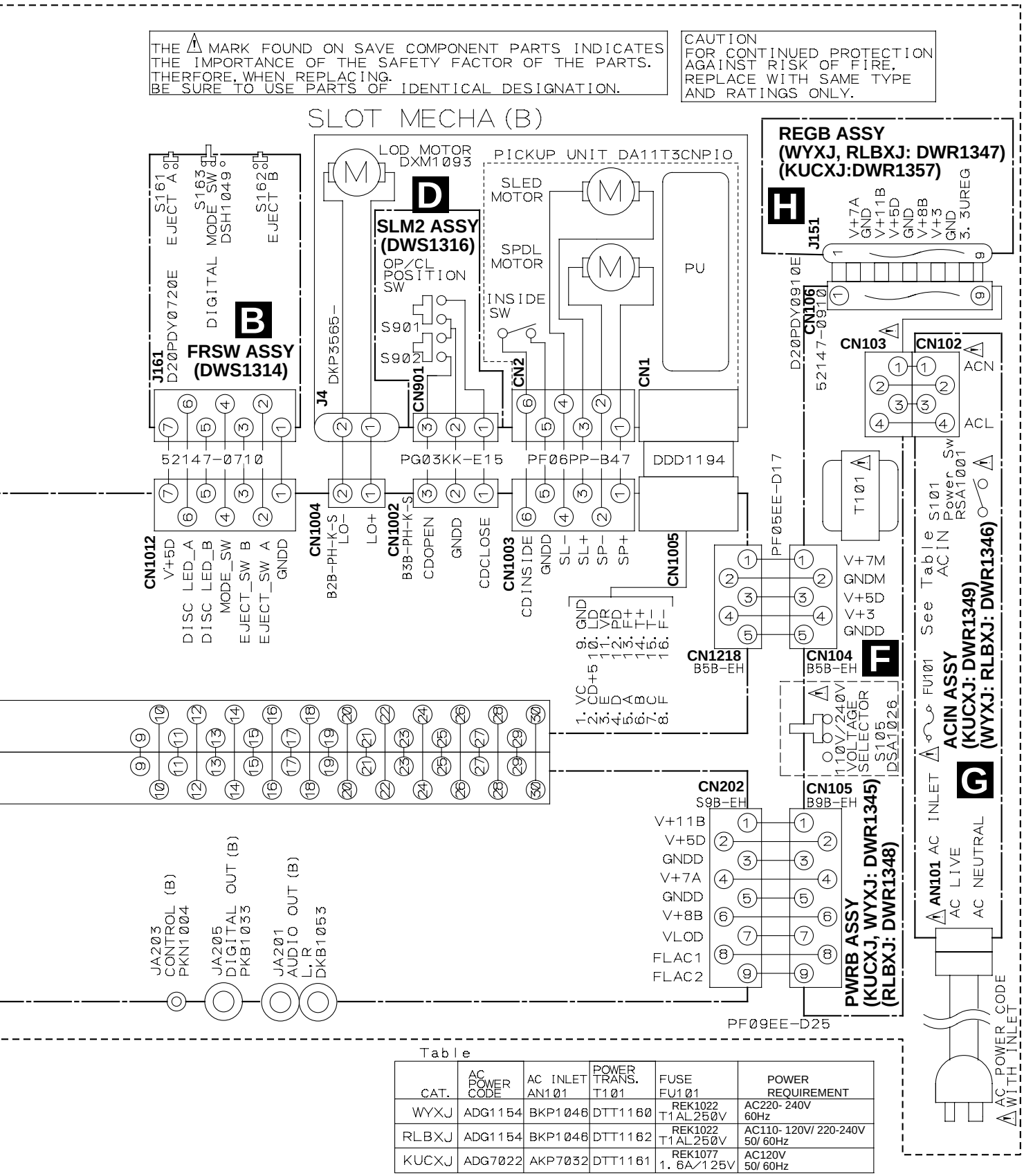

CN1011
CN201
DIGITAL OUT A
DIGITAL OUT B
(DOA)
(DOB)
E
JACB ASSY
Spartan Ⅱ
S/P I/O
P/S I/O
P/S
P L L (A)
P L L (B)
Divider
Comparator
VCO
3 Signals Conversion
LPF
IC1009
NJM2870F25
Master Clock
VSS1084
16.9344MHz
Reg2.5v
CLK
PRGM
DONE
RESET
IC1409
XC2S30-5TQ144C
BCK/ LRC Gerenation
AUDIO(B)
AUDIO(A)
CONTROL A
CONTROL B
AUDIO (A)
AUDIO (B)
LRCK IN
CLK
RESET
Req
Valid
COM
DSP
XCA56367
IC1402
AUDIO(B)
MCK(A)
MCK(B)
IC204
NJM4558
DAC
PE8001
IC201
IC202
AUDIO OUT A
AUDIO OUT B
IC1208
MM1561
Reg1.8v
NJM2870F18
IC1406
DIGITAL OUT
On/off SW
B
FRSW ASSY
J161
EJECT sw A/B
CN1012
SIGNAL ROUTE
: PB A AUDIO SIGNAL
: PB B AUDIO SIGNAL
: DIGITAL DATA A SIGNAL
: DIGITAL DATA B SIGNAL
: DIGITAL AUDIO A SIGNAL
: DIGITAL AUDIO B SIGNAL

L PHTB ASSY
JOG/ENCODER
GP1S94 x2
Function Key : B
FL
DEL1047
Slider-60mm
DCV1011
K CNTB ASSY

3.2 OVERALL WIRING DIAGRAM



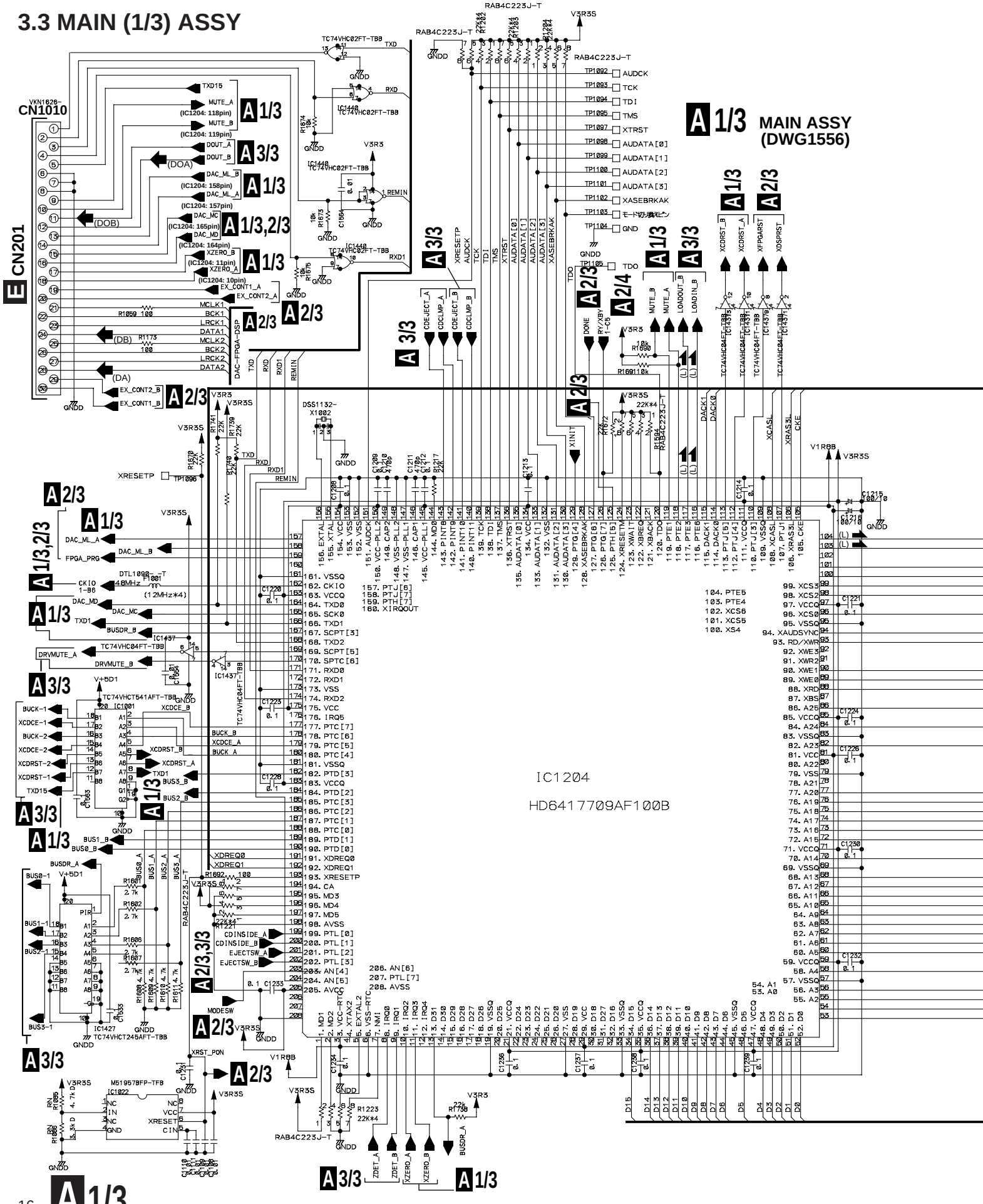
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".



Table

CAT.	AC POWER CODE	AC INLET AN101	POWER TRANS. T101	FUSE FU101	POWER REQUIREMENT
WYXJ	ADG1154	BKP1046	DTT1160	REK1022 T1AL250V	AC220- 240V 60Hz
RLBXJ	ADG1154	BKP1046	DTT1162	REK1022 T1AL250V	AC110- 120V/ 220-240V 50/ 60Hz
KUCXJ	ADG7022	AKP7032	DTT1161	REK1077 1.6A/125V	AC120V 50/ 60Hz

3.3 MAIN (1/3) ASSY



CAUTION

FOR CONTINUED PROTECTION AGAINST RISK OF FIRE,
REPLACE ONLY WITH SAME TYPE NO.
AEK7065- -F 49101.5 MFD, BY LITTELFUSE INK. FOR IC1015, IC1016
AEK7060- -F 491.500 MFD, BY LITTELFUSE INK. FOR IC1014
AEK7059- -F 491.315 MFD, BY LITTELFUSE INK. FOR IC1012, IC1013

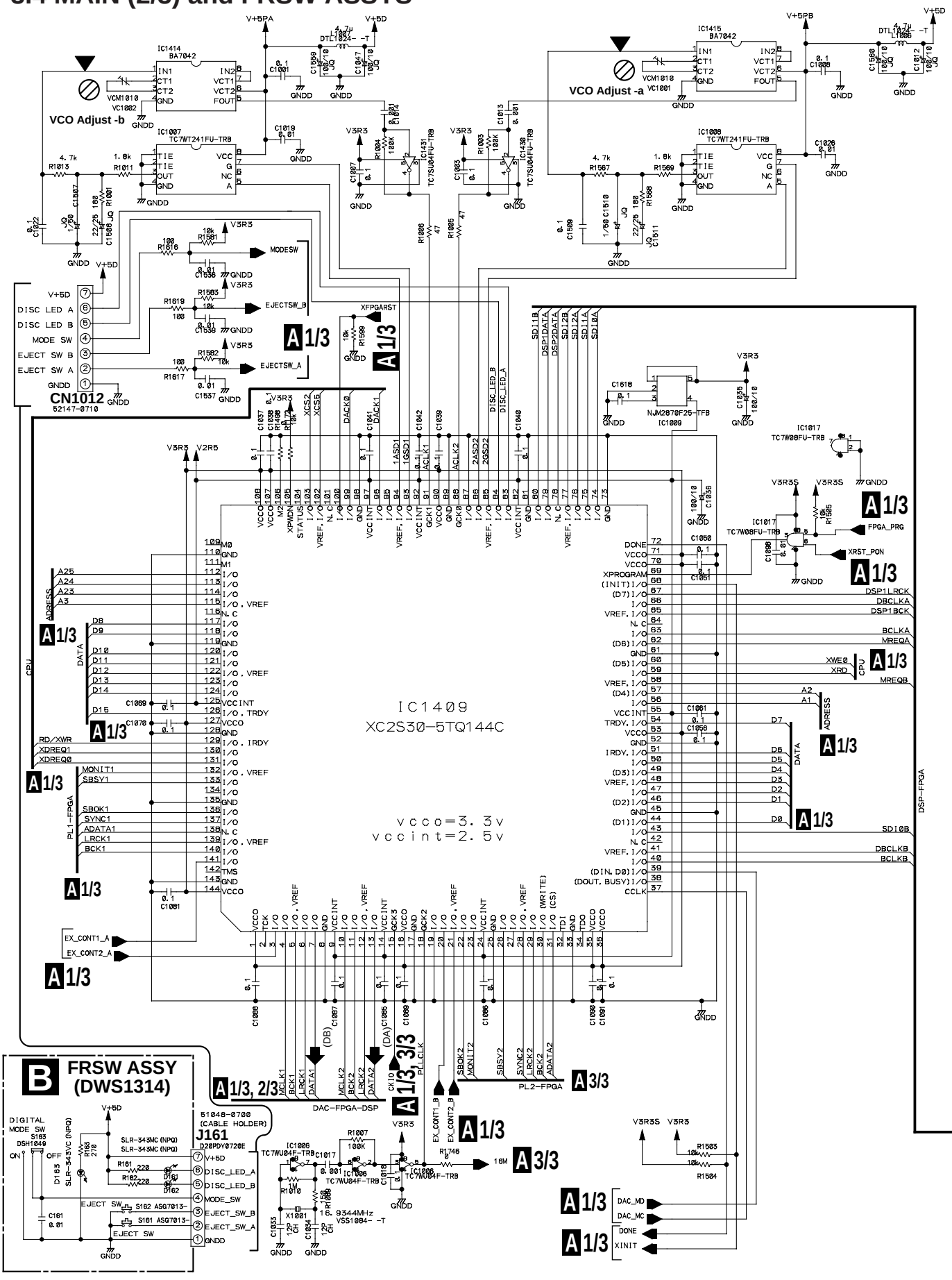
: The power supply is shown with the marked box.

THE ⚠ MARK FOUND ON SOME COMPONENT PARTS INDICATES
THE IMPORTANCE OF THE SAFETY FACTOR OF THE PARTS.
THERFORE, WHEN REPLACING,
BE SURE TO USE PARTS OF IDEnTICAL DESIGNATION.

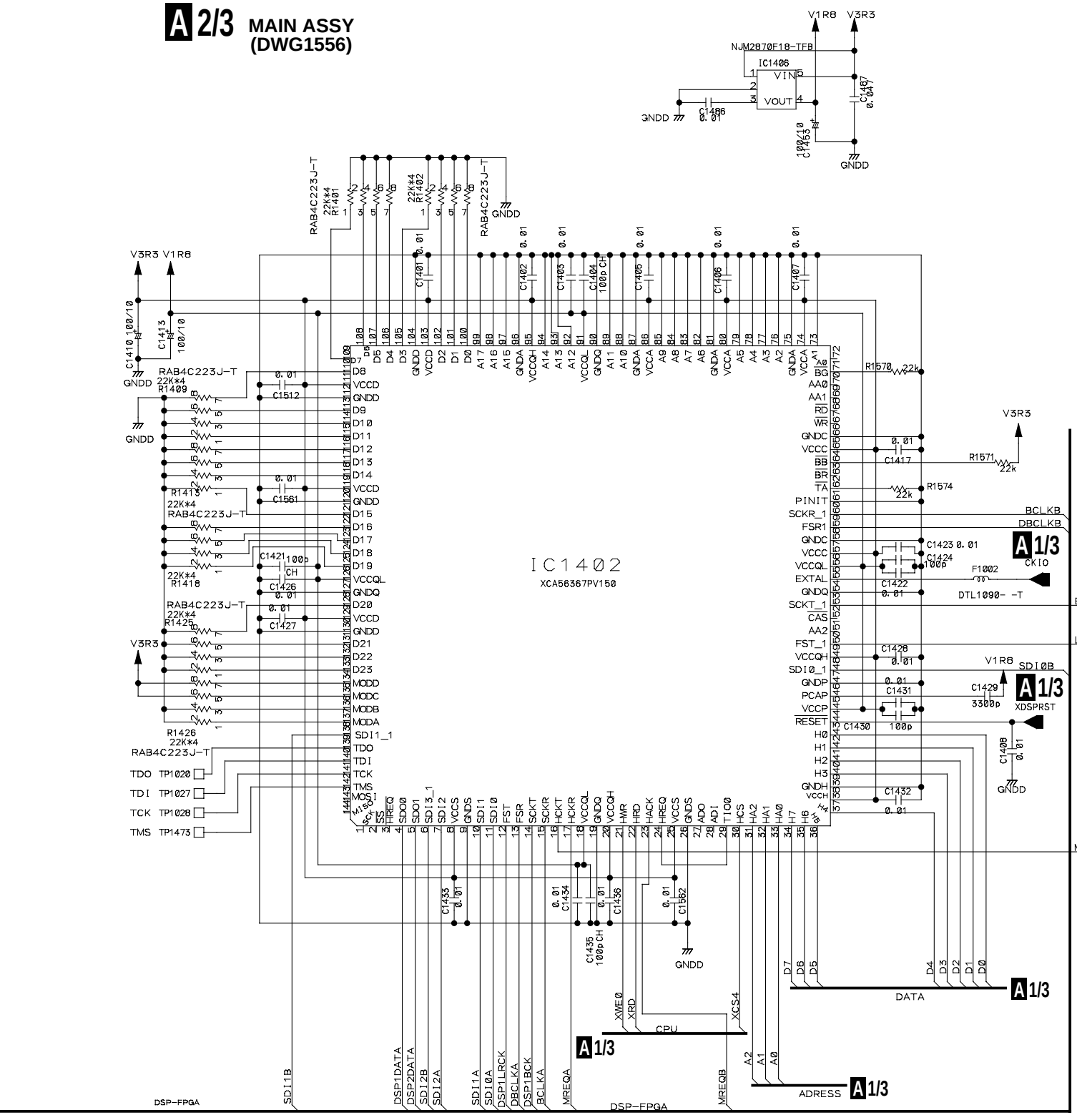
NOTES
RESISTOR
NO MARK :RS1/16S***J Ω
CAPACITOR
NO MARK ELECTROLYTIC
:CEAT μF
NO MARK CERAMIC
:CKSRYB μF
CH :CCSRCH μF
IS STANBY

SIGNAL ROUTE
(DA) : DIGITAL DATA A SIGNAL
(DB) : DIGITAL DATA B SIGNAL
(DOA) : DIGITAL OUT A SIGNAL
(DOB) : DIGITAL OUT B SIGNAL
(L) : LOADING MOTOR SIGNAL

3.4 MAIN (2/3) and FRSW ASSYS



A 2/3 MAIN ASSY (DWG1556)



SIGNAL ROUTE

(DA) ➡ : DIGITAL DATA A SIGNAL

(DB) ➡ : DIGITAL DATA B SIGNAL

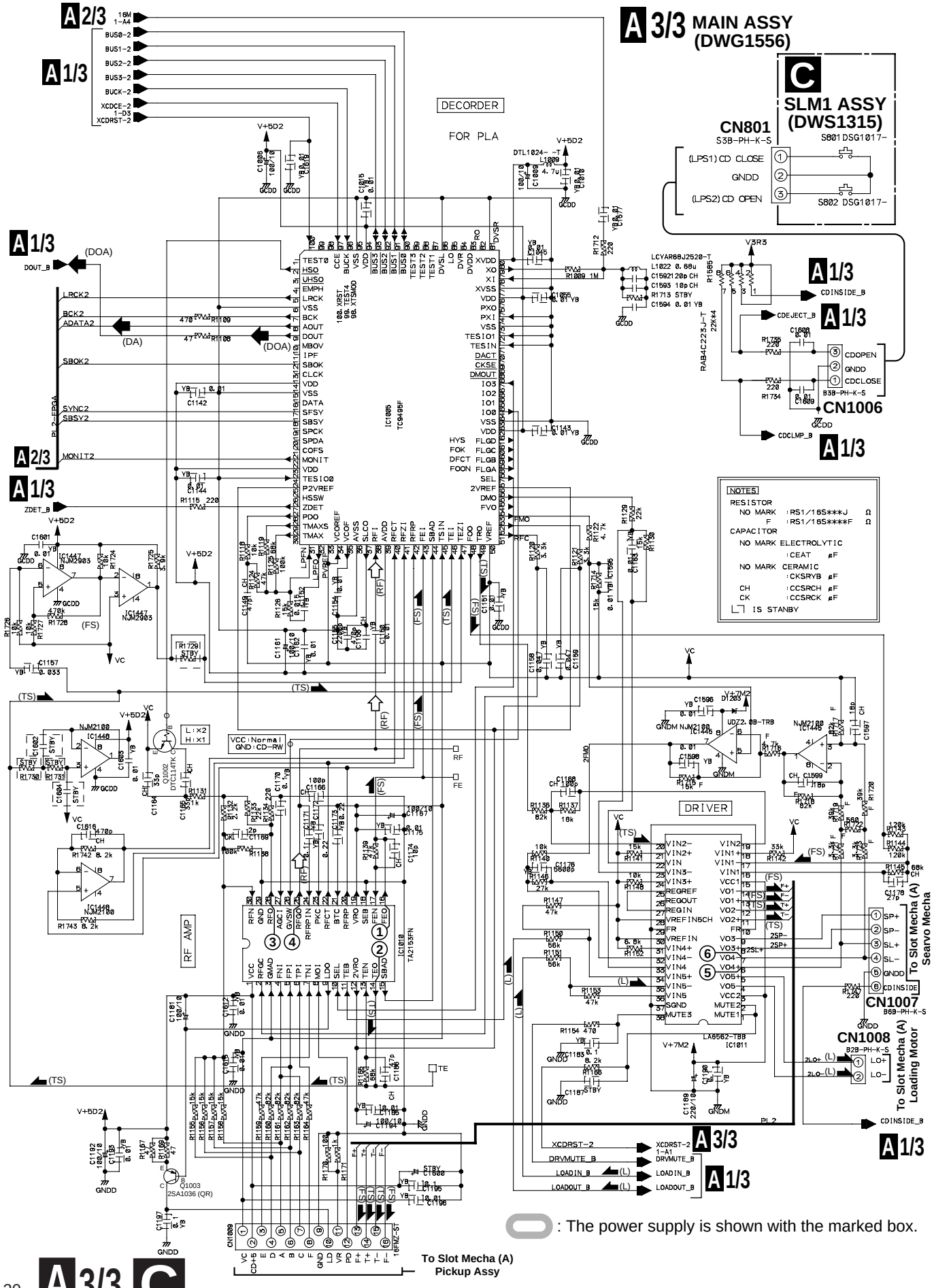
NOTES

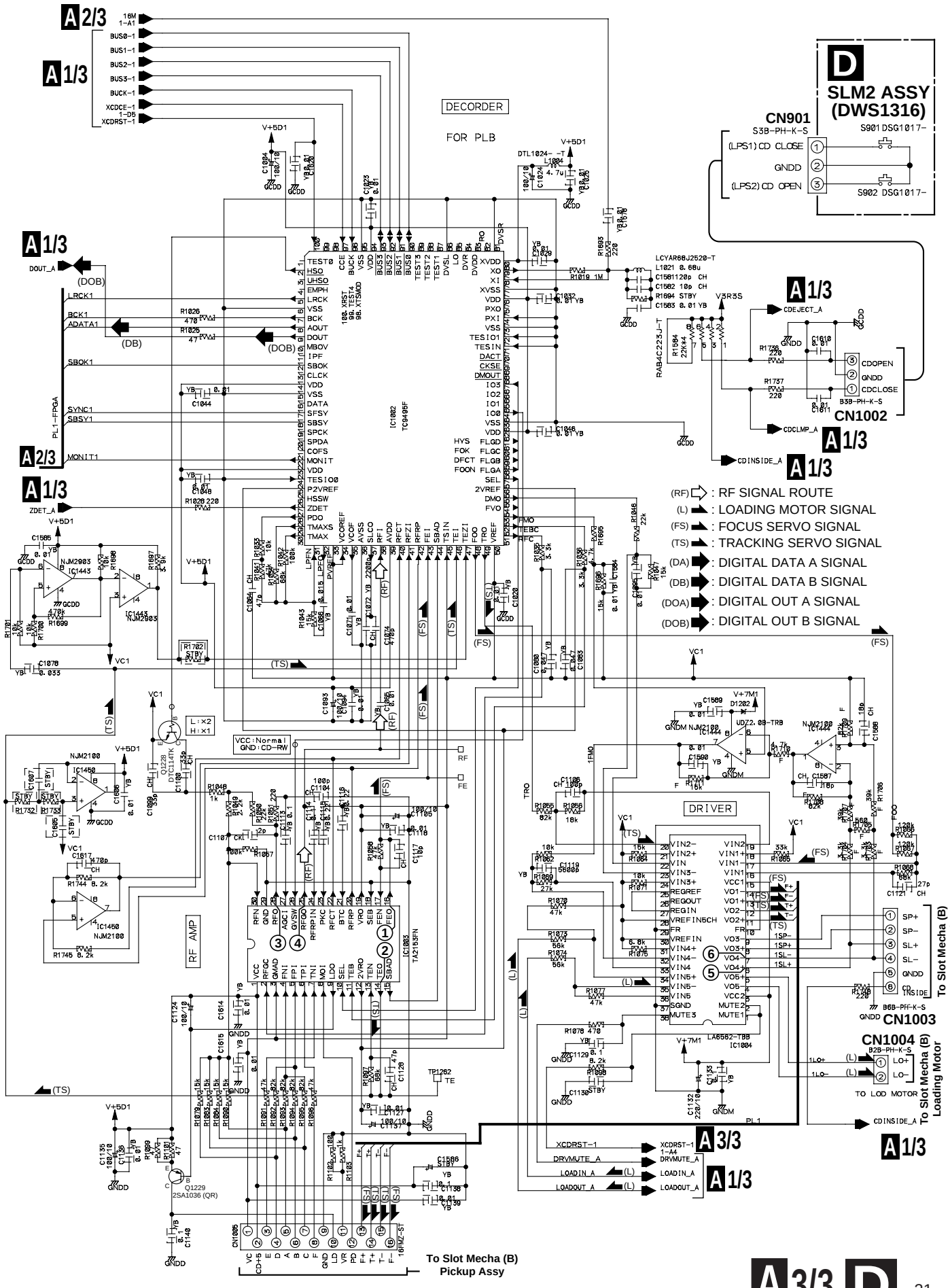
RESISTOR
- NO MARK : RS1/16S***J Ω
- RN : RN1/16SE****D Ω

CAPACITOR
- NO MARK ELECTROLYTIC
- : CEAT μF
- JQ : CEJQ μF
- NO MARK CERAMIC
- : CKSRYB μF
- CH : CCSRCH μF

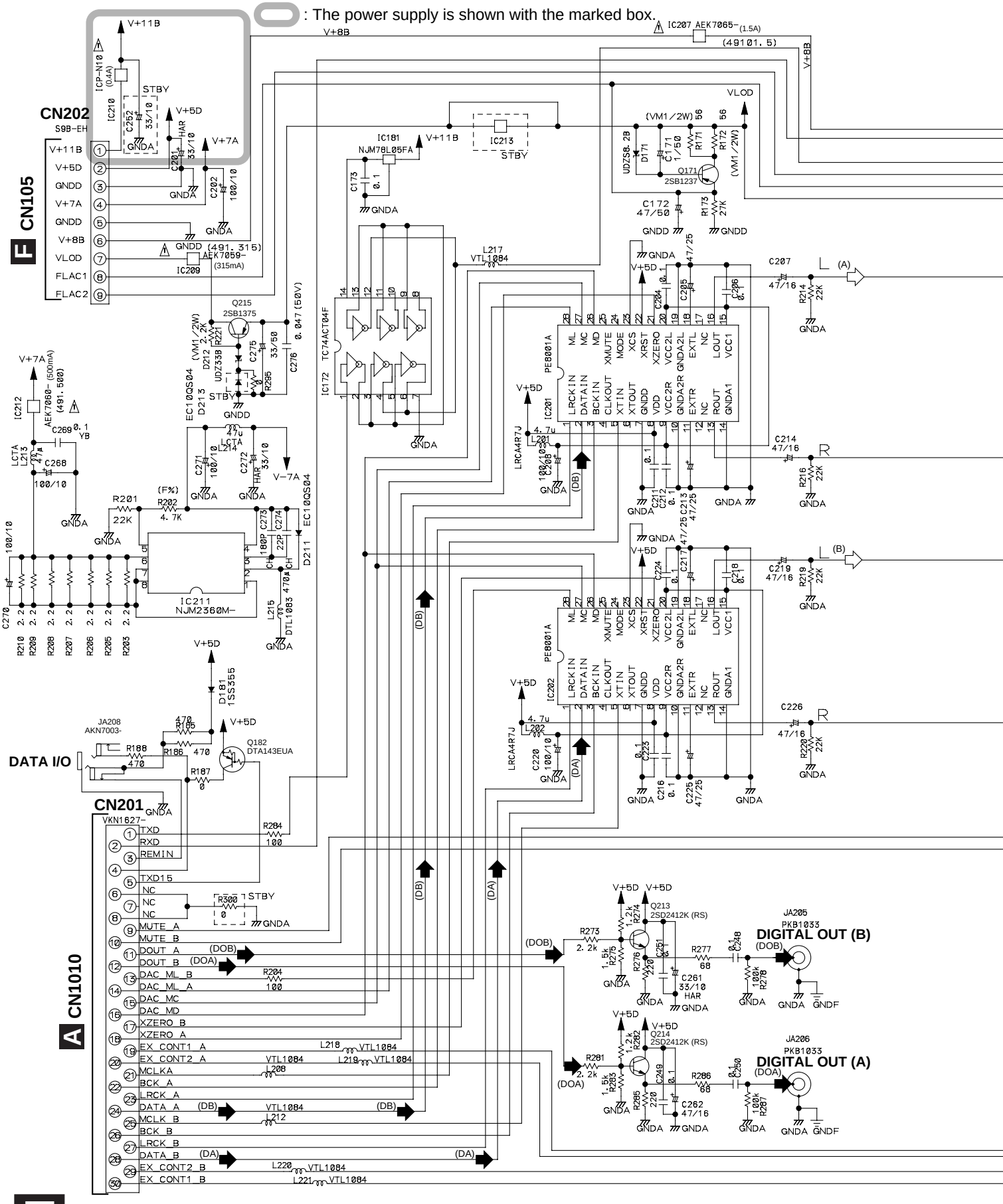
IS STANBY

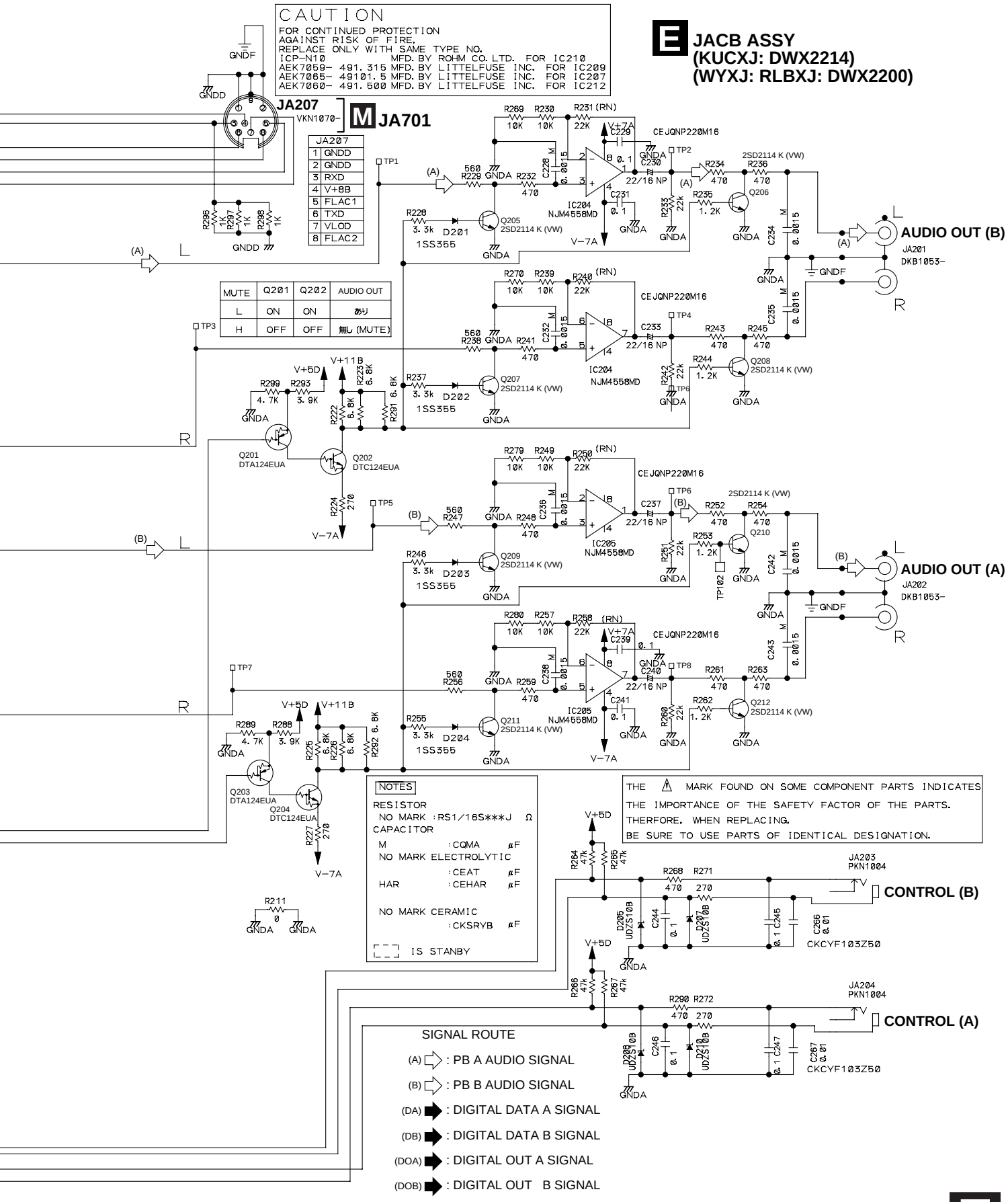
3.5 MAIN (3/3), SLM1 and SLM2 ASSYS



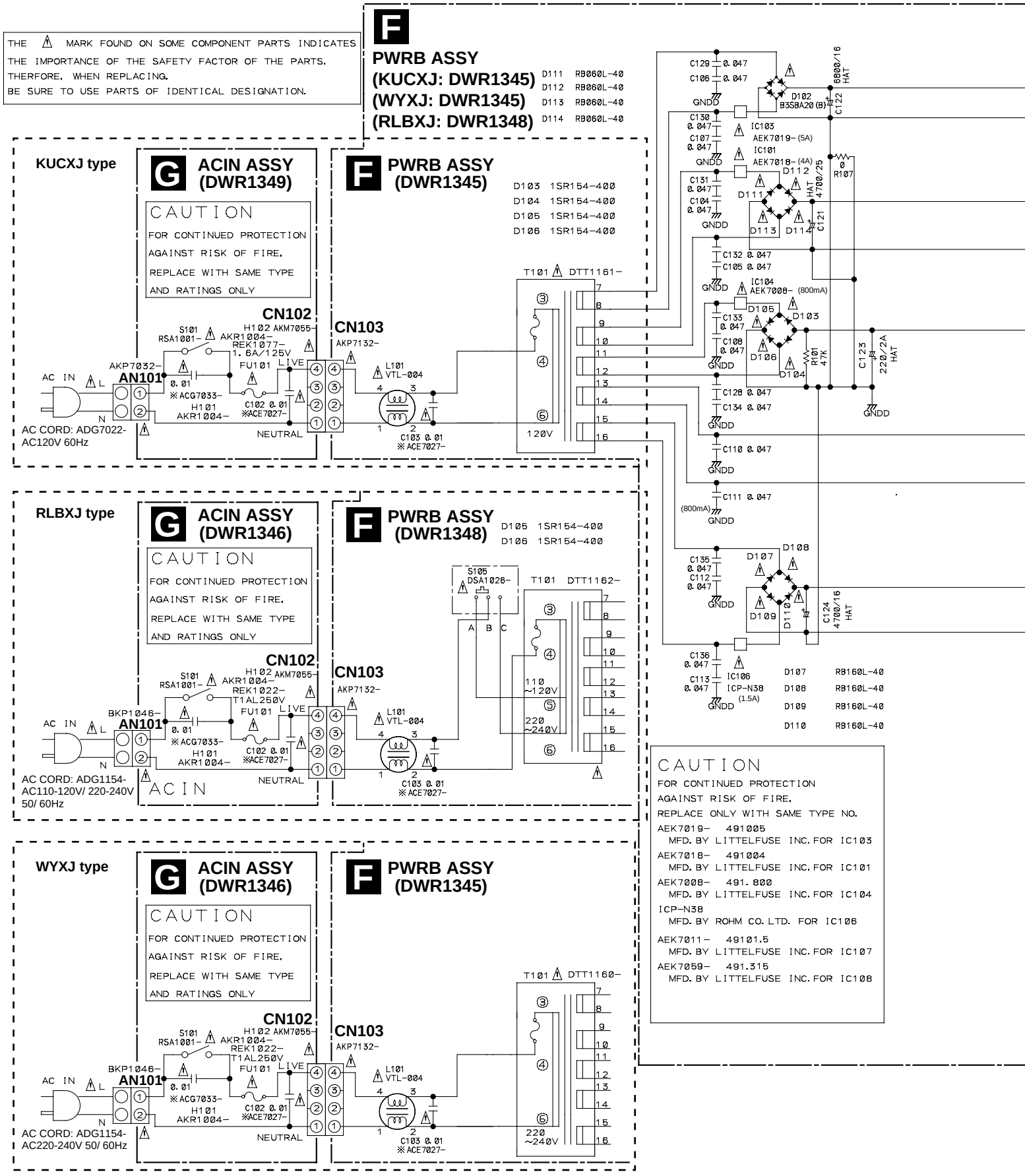

A 2/3
A 1/3
DECORDER
FOR PLB
D
SLM2 ASSY
(DWS1316)
CN901
S3B-PH-K-S
(LPS1) CD CLOSE
GNDD
(LPS2) CD OPEN
S901 DSG1017-
S902 DSG1017-
CN1002
B3B-PH-K-S
CDOPEN
CDCLOSE
CDEJECT_A
CDCLMP_A
CDINSIDE_A
(RF) : RF SIGNAL ROUTE
(L) : LOADING MOTOR SIGNAL
(FS) : FOCUS SERVO SIGNAL
(TS) : TRACKING SERVO SIGNAL
(DA) : DIGITAL DATA A SIGNAL
(DB) : DIGITAL DATA B SIGNAL
(DOA) : DIGITAL OUT A SIGNAL
(DOB) : DIGITAL OUT B SIGNAL
DRIVER
RF AMP
To Slot Mecha (B)
Searvo Mecha
CN1003
B6B-PFF-K-S
CN1004
B2B-PH-K-S
To Slot Mecha (B)
Loading Motor
TO LOD MOTOR
To Slot Mecha (B)
Pickup Assy
A 3/3
D
21

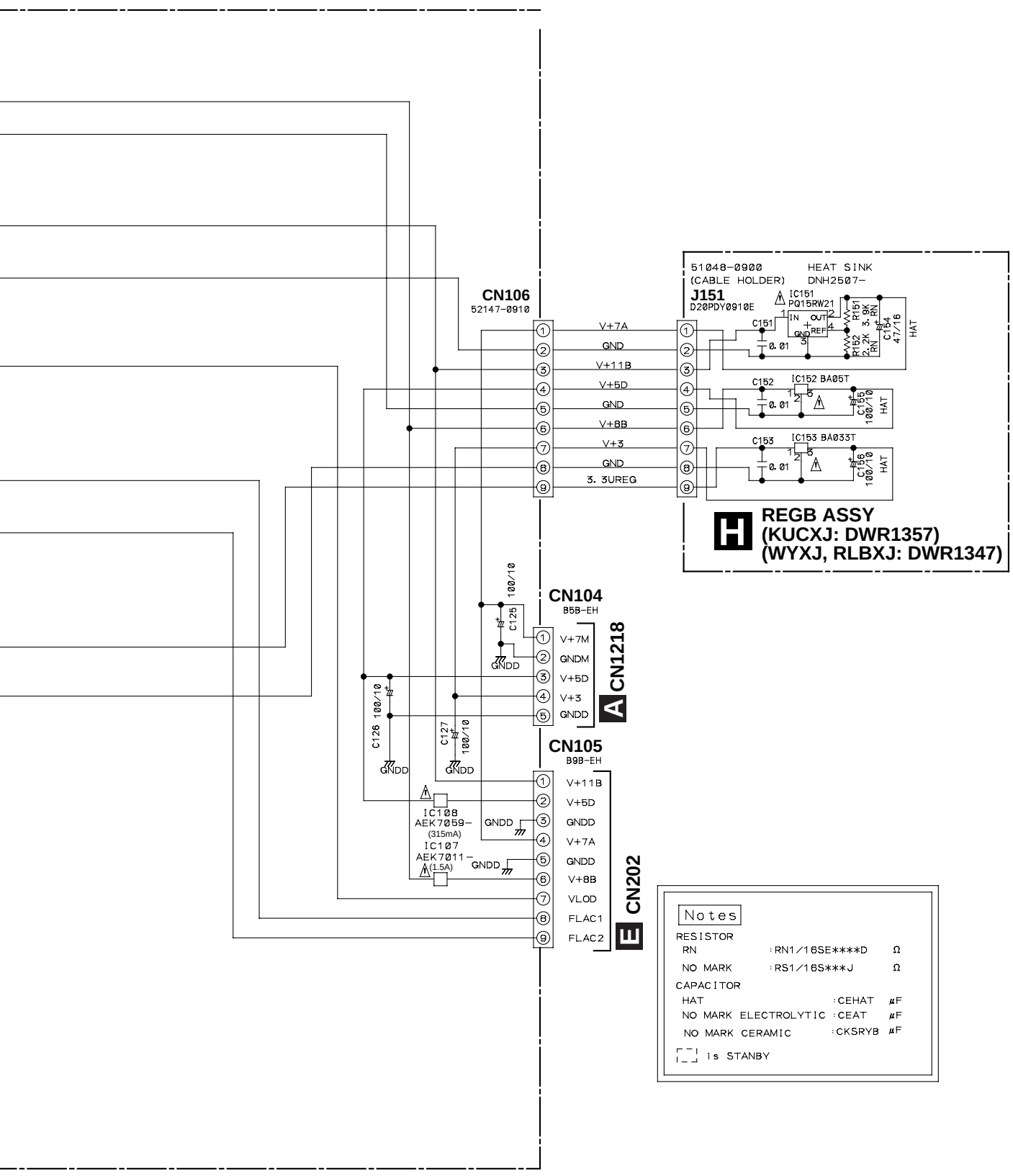
3.6 JACB ASSY


: The power supply is shown with the marked box.
CN202
S9B-EH
CN105
CN201
CN1010
DATA I/O
DIGITAL OUT (B)
DIGITAL OUT (A)
V+11B
V+8B
V+5D
V+7A
V-7A
VLOD
GNDA
GNDD
STBY
IC201
IC202
IC207 AEK7065-
IC209
IC211
NJM2360M-
IC212
IC213
IC172 TC74ACT04F
Q171 2SB1237
Q182 DTA143EUA
Q213 2SD2412K (RS)
Q214 2SD2412K (RS)
Q215 2SB1375
D181 1SS355
D211 EC10QS04
D212 EC10QS04
D213 EC10QS04
PE8001A
LRCA4R7J
VTL1084
(DB)
(DA)
(DOB)
(DOA)
(A)
(B)

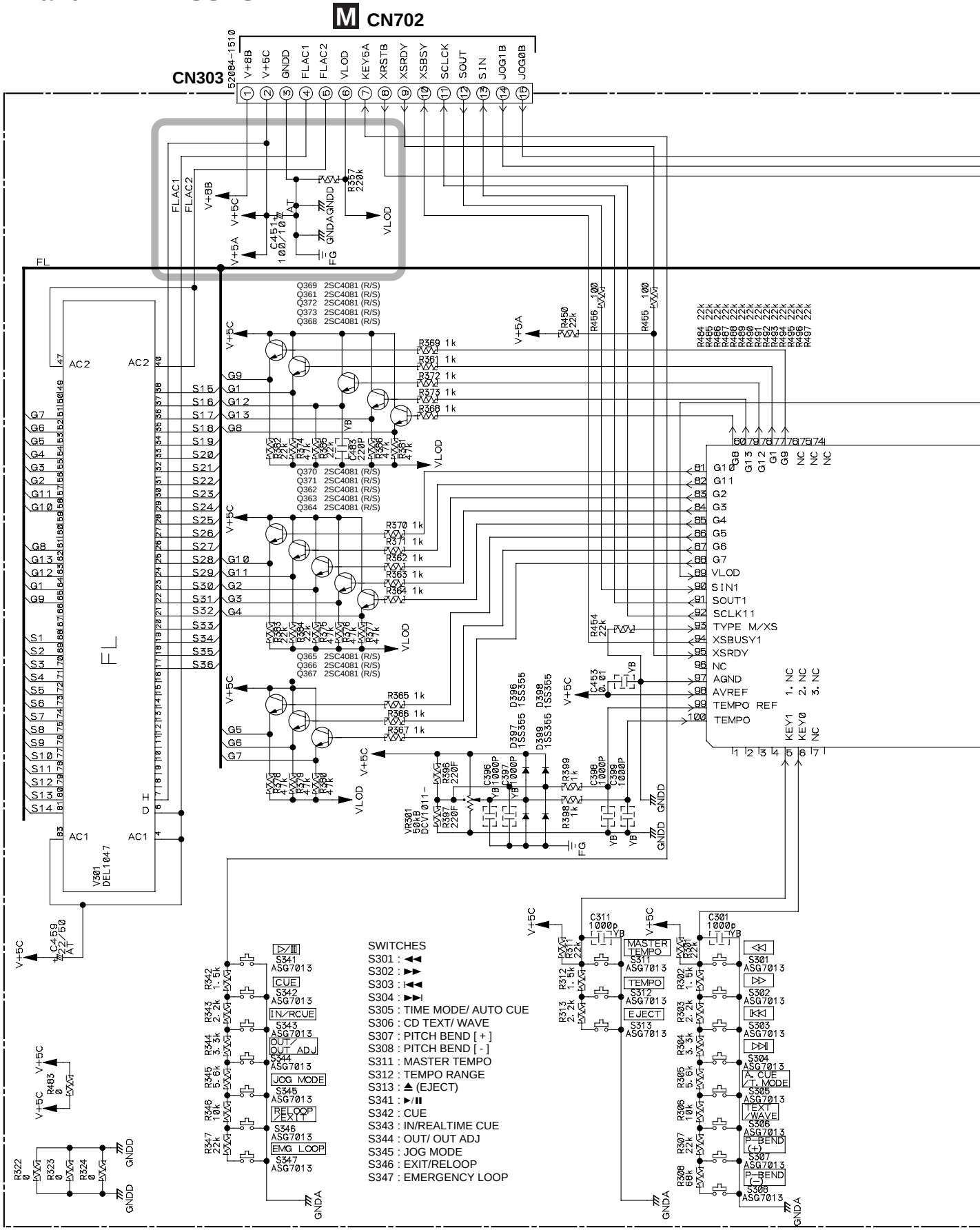

CAUTION
FOR CONTINUED PROTECTION
AGAINST RISK OF FIRE,
REPLACE ONLY WITH SAME TYPE NO.
ICP-N10 MFD. BY ROHM CO. LTD. FOR IC210
AEK7059- 491.315 MFD. BY LITTELFUSE INC. FOR IC209
AEK7065- 49101.5 MFD. BY LITTELFUSE INC. FOR IC207
AEK7060- 491.500 MFD. BY LITTELFUSE INC. FOR IC212
E JACB ASSY
(KUCXJ: DWX2214)
(WYXJ: RLBXJ: DWX2200)
JA207
VKN1070-
M JA701
JA207
1 GNDD
2 GNDD
3 RXD
4 V+8B
5 FLAC1
6 TXD
7 VLOD
8 FLAC2
MUTE Q201 Q202 AUDIO OUT
L ON ON あり
H OFF OFF 無し (MUTE)
AUDIO OUT (B)
JA201
DKB1053-
AUDIO OUT (A)
JA202
DKB1053-
IC204 NJM4558MD
IC205 NJM4558MD
CEJQNP220M16
2SD2114 K (VW)
1SS355
DTA124EUA
DTC124EUA
NOTES
RESISTOR
NO MARK :RS1/16S***J Ω
CAPACITOR
M :CQMA μF
NO MARK ELECTROLYTIC
:CEAT μF
HAR :CEHAR μF
NO MARK CERAMIC
:CKSRYB μF
IS STANBY
THE ⚠ MARK FOUND ON SOME COMPONENT PARTS INDICATES
THE IMPORTANCE OF THE SAFETY FACTOR OF THE PARTS.
THERFORE, WHEN REPLACING,
BE SURE TO USE PARTS OF IDENTICAL DESIGNATION.
CONTROL (B)
JA203
PKN1004
CONTROL (A)
JA204
PKN1004
UDZS10B
CKCYF103Z50
SIGNAL ROUTE
(A) : PB A AUDIO SIGNAL
(B) : PB B AUDIO SIGNAL
(DA) : DIGITAL DATA A SIGNAL
(DB) : DIGITAL DATA B SIGNAL
(DOA) : DIGITAL OUT A SIGNAL
(DOB) : DIGITAL OUT B SIGNAL

3.7 PWRB, REGB and ACIN ASSYS

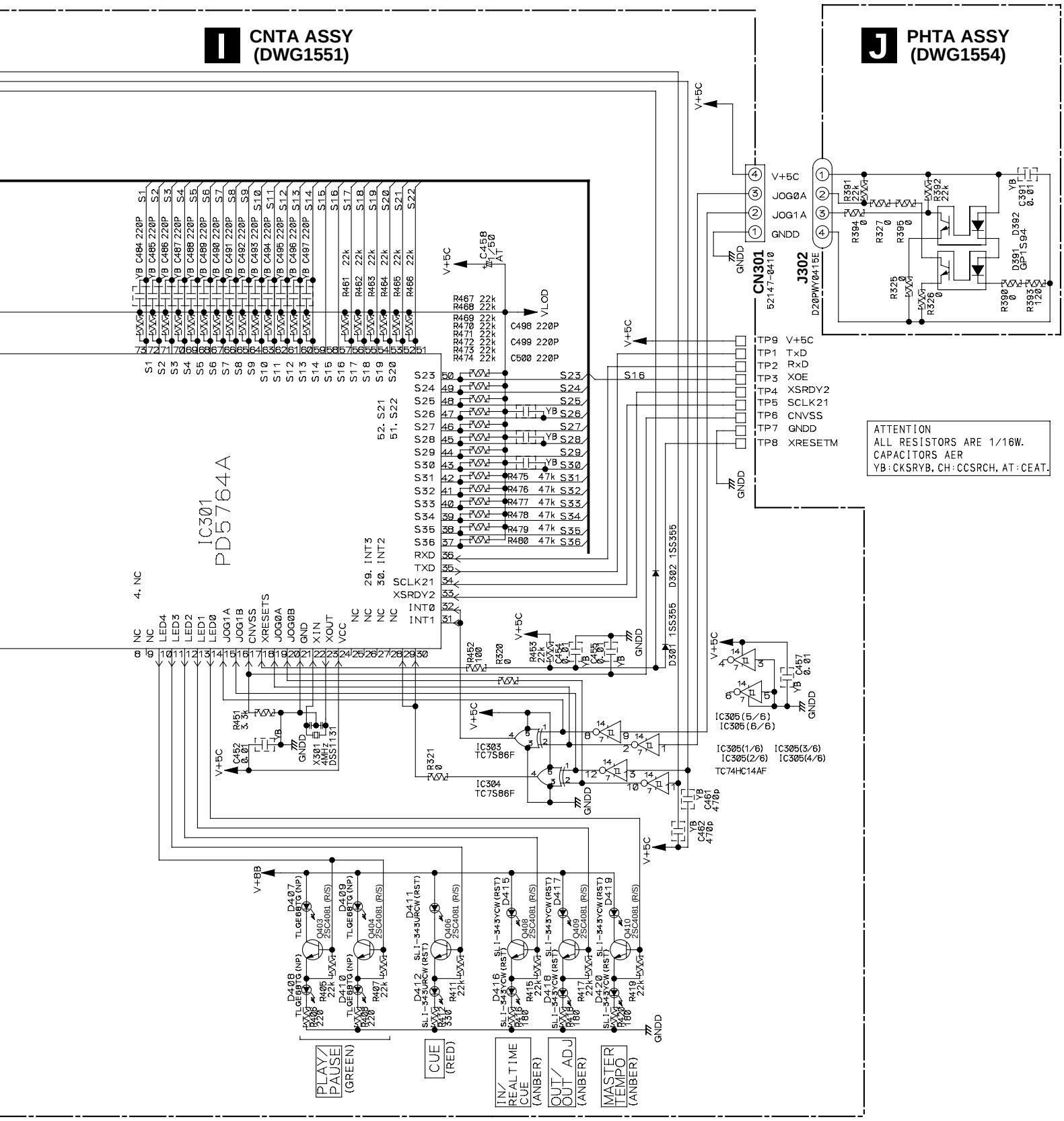



CN106
52147-0910
V+7A
GND
V+11B
V+5D
GND
V+8B
V+3
GND
3.3UREG
51048-0900 HEAT SINK
(CABLE HOLDER) DNH2507-
J151
D20PDY0910E
IC151
PQ15RW21
IN OUT
GND REF
C151
0.01
R151
3.9K
RN
R152
2.2K
RN
C154
47/16
HAT
C152
IC152 BA05T
0.01
C155
100/10
HAT
C153
IC153 BA033T
0.01
C156
100/10
HAT
H
REGB ASSY
(KUCXJ: DWR1357)
(WYXJ, RLBXJ: DWR1347)
CN104
B5B-EH
V+7M
GNDM
V+5D
V+3
GNDD
A CN1218
C125
100/10
GNDD
C126
100/10
GNDD
C127
100/10
GNDD
CN105
B9B-EH
V+11B
V+5D
GNDD
V+7A
GNDD
V+8B
VLOD
FLAC1
FLAC2
E CN202
IC108
AEK7059-
(315mA)
GNDD
IC107
AEK7011-
(1.5A)
GNDD
Notes
RESISTOR
RN :RN1/16SE***D Ω
NO MARK :RS1/16S***J Ω
CAPACITOR
HAT :CEHAT μF
NO MARK ELECTROLYTIC :CEAT μF
NO MARK CERAMIC :CKSRYB μF
is STANBY

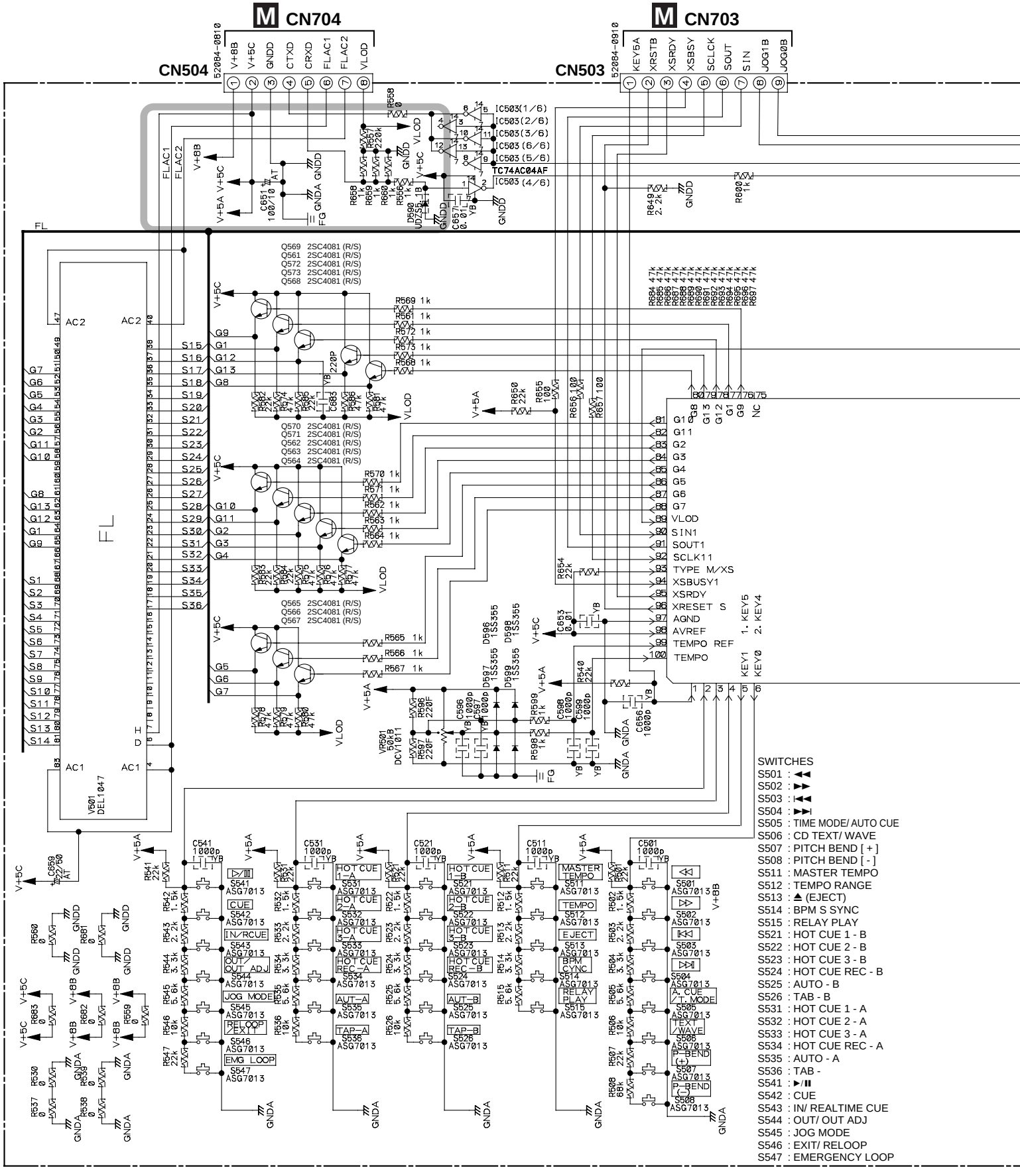
3.8 CNTA and PHTA ASSYS



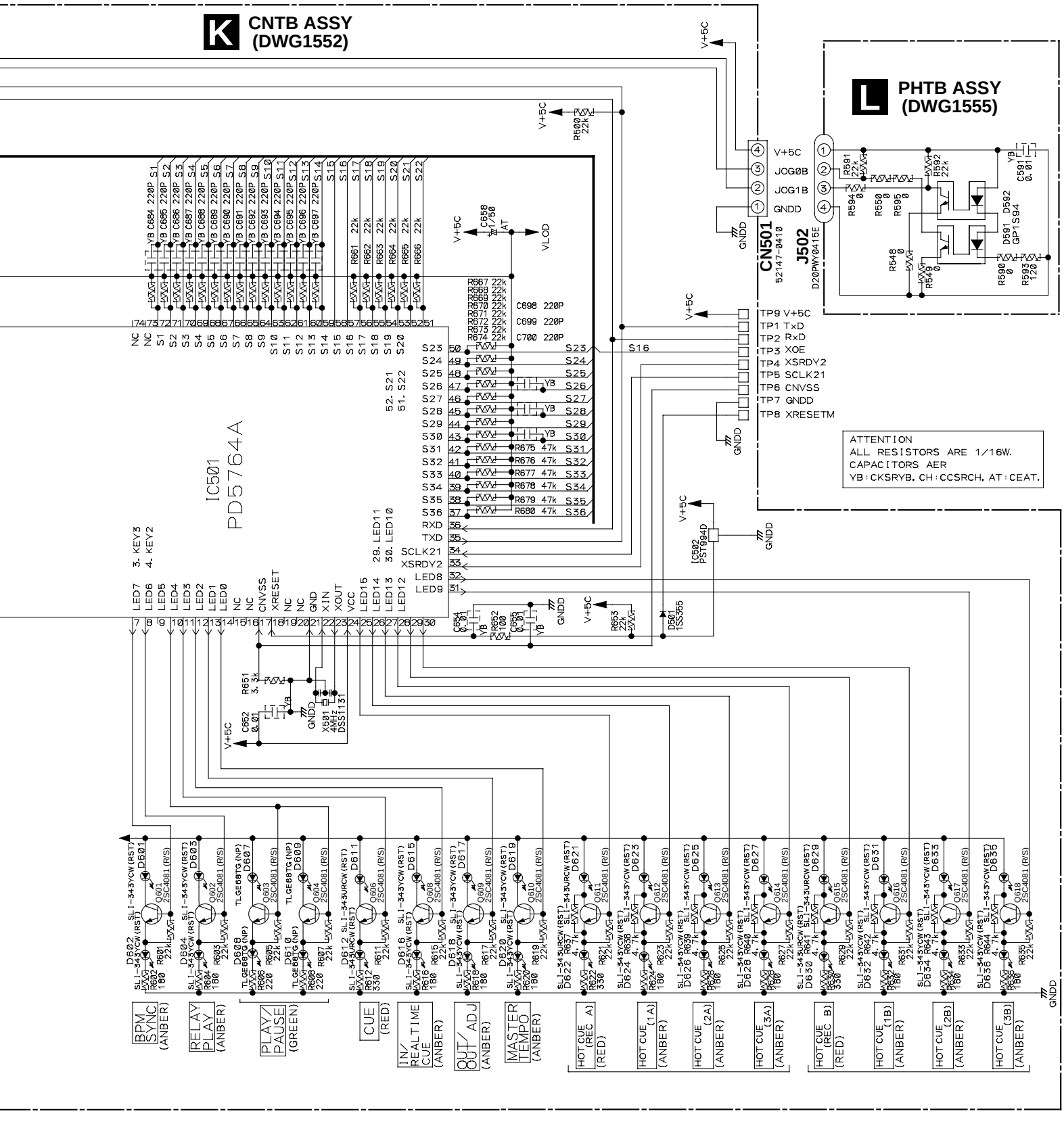
: The power supply is shown with the marked box.



3.9 CNTB and PHTB ASSYS

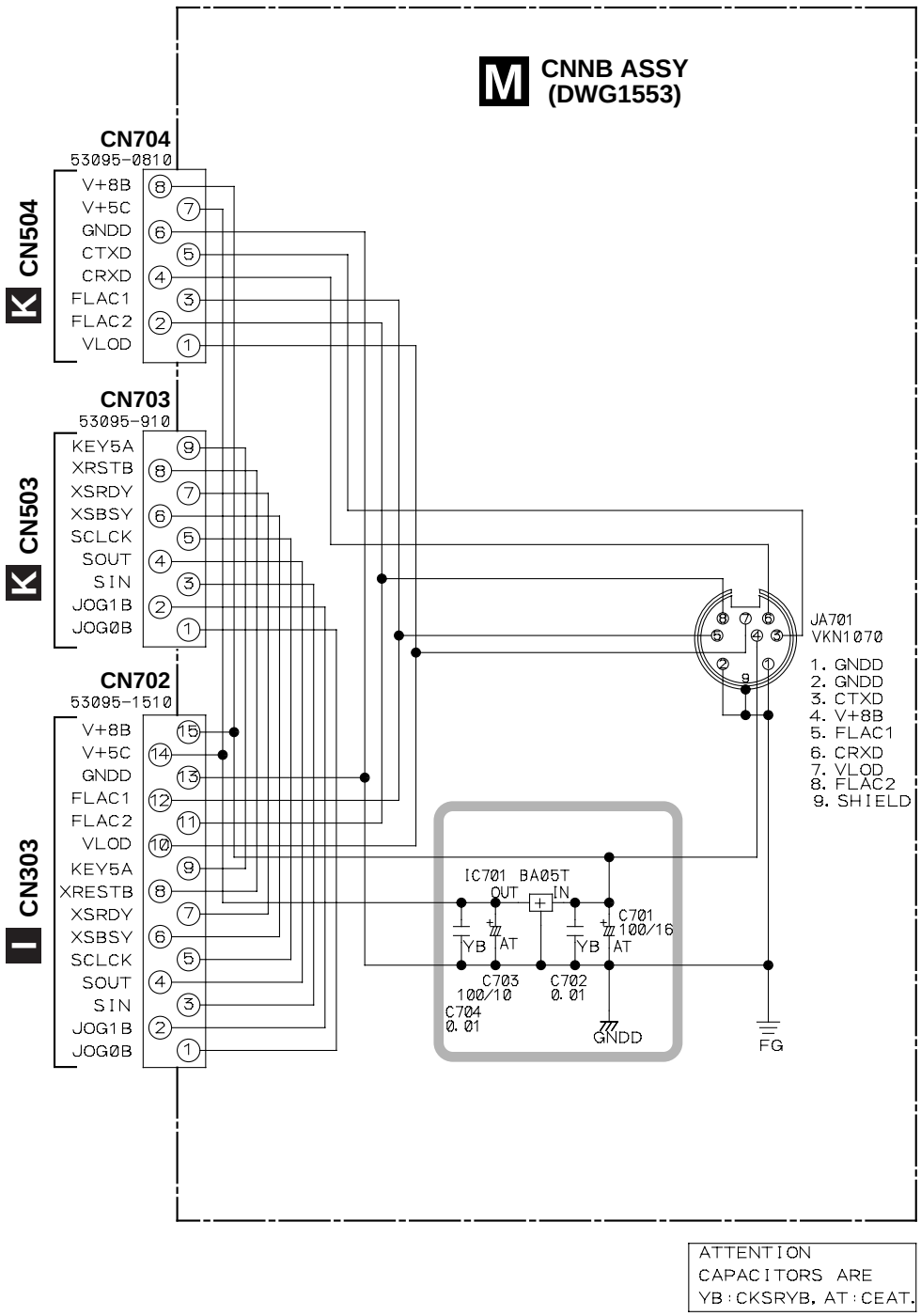


: The power supply is shown with the marked box.



3.10 CNNB ASSY

: The power supply is shown with the marked box.

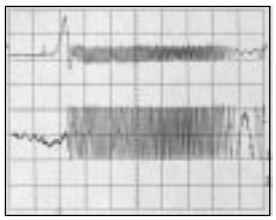


■ Waveforms

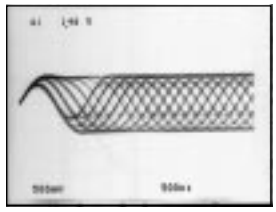
A 3/3 MAIN ASSY

Mode: Focus IN
① **IC1010- 16pin (FE)**
IC1003- 16pin (FE)
V: 0.5V/div. H: 5mS/div.

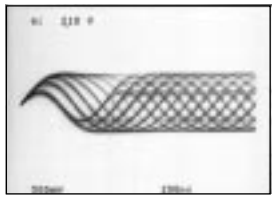
② **IC1010- 14pin (TE)**
IC1003- 14pin (TE)
V: 1V/div. H: 5mS/div.



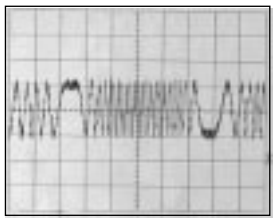
Mode: RF (Play Mode x1)
③ **IC1010- 28pin (RFO)**
IC1003- 28pin (RFO)
V: 500mV/div. H: 500nS/div.



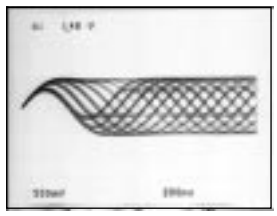
Mode: AGC RF (PLAY MODE x2)
④ **IC1010- 25pin (RFGO)**
IC1003- 25pin (RFGO
V: 500mV/div. H: 200nS/div.



Mode: Tracking Open
② **IC1010- 14pin (TE)**
IC1003- 14pin (TE)
V: 1V/div. H: 2mS/div.



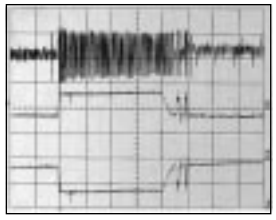
Mode: RF (Play Mode x2)
③ **IC1010- 28pin (RFO)**
IC1003- 28pin (RFO)
V: 500mV/div. H: 200nS/div.



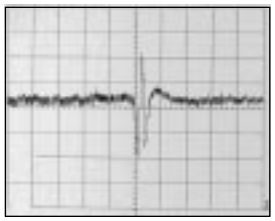
Mode: 1 Track → 16 Track Serch
② **IC1010- 14pin (TE)**
IC1003- 14pin (TE)
V: 1V/div. H: 0.2S/div.

⑤ **IC1011- 6pin (SL+)**
IC1004- 6pin (SL+)
V: 2V/div. H: 0.2S/div.

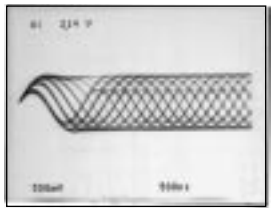
⑥ **IC1011- 7pin (SL-)**
IC1004- 7pin (SL-)
V: 2V/div. H: 0.2S/div.



Mode: 1 Track Jump
② **IC1010- 14pin (TE)**
IC1003- 14pin (TE)
V: 0.5V/div. H: 2mS/div.



Mode: AGC RF (Play Mode x1)
④ **IC1010- 25pin (RFGO)**
IC1003- 25pin (RFGO)
V: 500mV/div. H: 500nS/div.



■ Voltage (1/3)

A 1/3 MAIN ASSY

IC1200 (DYW1701)

Pin No.	Voltage (V)
1	0 to 3.2
2	0 to 3.2
3	0 to 3.2
4	0 to 3.2
5	0 to 3.2
6	0 to 3.2
7	0 to 3.2
8	0 to 3.2
9	0 to 3.2
10	0.7
11	0.7
12	0 to 3.2
13	0.7
14	0.7
15	3.1
16	0 to 3.2
17	0 to 3.2
18	0 to 3.2
19	0 to 3.2
20	0 to 3.2
21	0 to 3.2
22	0 to 3.2
23	0 to 3.2
24	0 to 3.2
25	0 to 3.2
26	3.2
27	0
28	0 to 3.2
29	0 to 3.2
30	0 to 3.2
31	0 to 3.2
32	0 to 3.2
33	0 to 3.2
34	0 to 3.2
35	0 to 3.2
36	0 to 3.2
37	3.1
38	0 to 3.2
39	0 to 3.2
40	0 to 3.2
41	0 to 3.2
42	0 to 3.2
43	0 to 3.2
44	0 to 3.2
45	0 to 3.2
46	0
47	3.1
48	0 to 3.2

IC1022 (M51957BFP)

Pin No.	Voltage (V)
1	0
2	0
3	0
4	0
5	1.3
6	3.2
7	3.2
8	0

IC1204 (HD6417709AF100B)

Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	3.2	91	3.2	181	0
2	0	92	3.2	182	0 to 3.2
3	1.8	93	0 to 3.3	183	3.2
4	1.6	94	3.2	184	0 to 3.2
5	0	95	0	185	0 to 3.2
6	0	96	3.3	186	0 to 3.2
7	0	97	3.3	187	0 to 3.2
8	0	98	0 to 3.3	188	0 to 3.2
9	0	99	0 to 3.3	189	0 to 3.2
10	3.3	100	0 to 3.3	190	0 to 3.2
11	3.2	101	3.2	191	0 to 3.2
12	3.3	102	3.2	192	0 to 3.2
13	0 to 3.3	103	3.2	193	3.2
14	0	104	3.2	194	3.1
15	0	105	3.2	195	0
16	0	106	0 to 3.3	196	3.1
17	3.3	107	0 to 3.3	197	0
18	3.3	108	0 to 3.3	198	0
19	0	109	0	199	3.0
20	0	110	0	200	3.0
21	3.3	111	3.2	201	3.2
22	0	112	0	202	3.2
23	0	113	0	203	3.1
24	0	114	0 to 3.3	204	0
25	0	115	0 to 3.3	205	3.2
26	0	116	3.2	206	0.7
27	0	117	3.2	207	0.7
28	0	118	0	208	0
29	1.8	119	0		
30	0	120	3.3		
31	0	121	3.2		
32	0	122	3.2		
33	0	123	3.2		
34	0 to 3.3	124	3.2		
35	3.2	125	3.2		
36	0 to 3.3	126	3.1		
37	0 to 3.3	127	3		
38	0 to 3.3	128	3.2		
39	0 to 3.3	129	2.8		
40	0 to 3.3	130	0		
41	0 to 3.3	131	0		
42	0 to 3.3	132	0		
43	0 to 3.3	133	3.2		
44	0 to 3.3	134	1.8		
45	0	135	3.2		
46	0 to 3.3	136	3.0		
47	3.3	137	3.0		
48	0 to 3.3	138	3.0		
49	0 to 3.3	139	3.0		
50	0 to 3.3	140	3.1		
51	0 to 3.3	141	0		
52	0 to 3.3	142	3.0		
53	0 to 3.3	143	0		
54	0 to 3.3	144	0		
55	0 to 3.3	145	1.8		
56	0 to 3.3	146	0.7		
57	0	147	0		
58	0 to 3.3	148	0		
59	3.3	149	0.7		
60	0 to 3.3	150	1.8		
61	0 to 3.3	151	1.9		
62	0 to 3.3	152	0		
63	0 to 3.3	153	0		
64	0 to 3.3	154	1.8		
65	0 to 3.3	155	1.6		
66	0 to 3.3	156	1.1		
67	0 to 3.3	157	3.2		
68	0 to 3.3	158	3.2		
69	0	159	3.2		
70	0 to 3.3	160	0 to 3.2		
71	3.3	161	0		
72	0 to 3.3	162	0 to 3.2		
73	0 to 3.3	163	3.2		
74	0 to 3.3	164	0		
75	0 to 3.3	165	3.2		
76	0 to 3.3	166	3.2		
77	0 to 3.3	167	0 to 3.2		
78	0 to 3.3	168	0 to 3.2		
79	0	169	0		
80	0	170	0		
81	1.8	171	3.2		
82	0 to 3.3	172	3.2		
83	0	173	0		
84	0 to 3.3	174	0 to 3.2		
85	3.3	175	1.8		
86	0 to 3.3	176	3.0		
87	3.2	177	0 to 3.2		
88	0 to 3.3	178	0 to 3.2		
89	0 to 3.3	179	0 to 3.2		
90	0 to 3.3	180	0 to 3.2		

IC1408 (K4S281632)

Pin No.	Voltage (V)
1	3.2
2	0 to 3.3
3	3.2
4	0 to 3.3
5	0 to 3.3
6	0
7	0 to 3.3
8	0 to 3.3
9	3.2
10	0 to 3.3
11	0 to 3.3
12	0
13	0 to 3.3
14	3.2
15	0 to 3.3
16	0 to 3.3
17	0 to 3.3
18	0 to 3.3
19	0 to 3.3
20	0 to 3.3
21	0 to 3.3
22	0 to 3.3
23	0 to 3.3
24	0 to 3.3
25	0 to 3.3
26	0 to 3.3
27	3.2
28	0
29	0 to 3.3
30	0 to 3.3
31	0 to 3.3
32	0 to 3.3
33	0 to 3.3
34	0 to 3.3
35	0 to 3.3
36	0
37	3.2
38	0 to 3.3
39	0 to 3.3
40	0.7
41	0
42	0 to 3.3
43	3.2
44	0 to 3.3
45	0 to 3.3
46	0
47	0 to 3.3
48	0 to 3.3
49	3.2
50	0.7
51	0 to 3.3
52	0
53	0 to 3.3
54	0

■ Voltage (2/3)

A 2/3 MAIN ASSY

IC1402 (XCA56367PV150)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	1.1	91	1.8
2	0.7	92	0
3	0.6	93	0
4	0 to 3.2	94	0
5	0 to 3.2	95	3.2
6	0 to 3.2	96	0
7	0 to 3.2	97	0
8	3.2	98	0
9	0	99	0
10	0 to 3.2	100	0
11	0 to 3.2	101	0
12	0 to 3.2	102	0
13	0 to 3.2	103	3.2
14	0	104	0
15	0 to 3.2	105	0
16	0 to 3.2	106	0
17	0 to 3.2	107	0
18	1.8	108	0
19	0	109	0
20	3.3	110	0
21	0 to 3.2	111	3.2
22	0 to 3.2	112	0
23	0 to 3.2	113	0
24	0	114	0.6
25	3.2	115	0.6
26	0	116	0
27	0	117	0
28	0.7	118	0.6
29	0	119	0.7
30	3.2	120	0.7
31	3.2	121	0
32	0.8	122	0
33	0 to 3.2	123	0
34	0 to 3.2	124	0
35	0 to 3.2	125	0
36	0 to 3.2	126	0
37	0 to 3.2	127	0
38	3.2	128	0
39	0	129	3.2
40	0 to 3.2	130	0
41	0 to 3.2	131	0
42	0 to 3.2	132	0
43	0 to 3.2	133	0
44	3.2	134	2.6
45	1.8	135	0
46	0.9	136	0
47	0	137	0
48	0 to 3.2	138	1 to 3.2
49	3.2	139	0
50	0 to 3.2	140	0
51	0.9	141	0
52	0.7	142	0
53	3.2	143	0
54	0 to 3.2	144	0.6
55	0		
56	0 to 3.4		
57	1.8		
58	0		
59	0 to 3.2		
60	0 to 3.2		
61	0.7		
62	0		
63	3.2		
64	3.1		
65	3.2		
66	0		
67	0.7		
68	0.7		
69	0.7		
70	0.7		
71	0		
72	0.7		
73	0		
74	3.2		
75	0		
76	0		
77	0		
78	0		
79	0		
80	3.2		
81	0		
82	0		
83	0		
84	0		
85	0		
86	3.2		
87	0		
88	0		
89	0		
90	0		

IC1409 (XC2S30-5TQ144C)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	3.2	91	0
2	2.4	92	2.5
3	3.1	93	0
4	0.4 to 2.1	94	3.2
5	0 to 3.1	95	0
6	0 to 3.1	96	0 to 3.2
7	0 to 3.1	97	2.5
8	0	98	0
9	0	99	0 to 3.2
10	0.4 to 2.9	100	3.2
11	0 to 3.1	101	0
12	0 to 3.1	102	3.2
13	0 to 3.1	103	0 to 3.2
14	2.5	104	0.6
15	0 to 3.1	105	0.6
16	0.7	106	0
17	0.6	107	3.2
18	0.6	108	3.2
19	0.6	109	2.5
20	0.6	110	0
21	3.2	111	2.5
22	0.6	112	0 to 3.2
23	0 to 4.9	113	0 to 3.2
24	2.5	114	0 to 3.2
25	0.6	115	0 to 3.2
26	0.6	116	0
27	0	117	0 to 3.2
28	0 to 4.9	118	0 to 3.2
29	0 to 4.9	119	0
30	11 to 3.8	120	0 to 3.2
31	0 to 4.9	121	0 to 3.2
32	2.4	122	0 to 3.2
33	0.6	123	0 to 3.2
34	0.6	124	0 to 3.2
35	3.2	125	0.6
36	0.6	126	3.2
37	3.2	127	0
38	0	128	0.7
39	0	129	0.7
40	0 to 3.0	130	0 to 3.2
41	0 to 3.2	131	0 to 3.2
42	0	132	0 to 4.9
43	0 to 3.2	133	0.7
44	0 to 3.2	134	0
45	0	135	0
46	0 to 3.2	136	0 to 4.9
47	0 to 3.2	137	0 to 4.9
48	0 to 3.2	138	0 to 4.9
49	0 to 3.2	139	0 to 4.9
50	0 to 3.2	140	1 to 3.8
51	0 to 3.2	141	3.2
52	0	142	2.4
53	3.2	143	0
54	0 to 3.2	144	3.2
55	2.5		
56	0 to 3.2		
57	0 to 3.2		
58	0 to 3.2		
59	0 to 3.2		
60	0 to 3.2		
61	0		
62	0		
63	0 to 3.0		
64	0		
65	0 to 3.0		
66	0 to 3.1		
67	2.9		
68	2.9		
69	3.2		
70	3.2		
71	3.2		
72	3.2		
73	0		
74	0 to 3.1		
75	0 to 3.1		
76	0 to 3.1		
77	0.6		
78	0 to 3.1		
79	0 to 3.1		
80	0 to 3.1		
81	0		
82	2.5		
83	0.6		
84	0		
85	0		
86	3.2		
87	0		
88	0.7 to 2.6		
89	0		
90	0.6		

IC1414 (BA7042)

Pin No.	Voltage (V)
1	0
2	2.3
3	0
4	0
5	2.5 to 4.5
6	5.0
7	2.6
8	2.6

■ Voltage (3/3)

A 3/3 MAIN ASSY

IC1005 (TC9495F)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	4.4	91	0 to 5.0
2	0	92	0 to 5.0
3	5.0	93	0 to 5.0
4	0	94	5.0
5	0 to 4.9	95	0
6	0	96	5.0
7	0.3 to 4.4	97	0 to 5.0
8	0 to 4.9	98	4.7
9	0	99	4.7
10	0	100	5.0
11	0		
12	5.0		
13	0 to 4.2		
14	5.0		
15	0		
16	0 to 4.9		
17	0 to 4.9		
18	0 to 4.9		
19	0.3 to 4.2		
20	0 to 4.7		
21	0 to 4.9		
22	0 to 4.5		
23	4.9		
24	0		
25	4.2		
26	2.1		
27	0 to 4.9		
28	5.0		
29	0		
30	4.2		
31	2.1		
32	2.0		
33	2.1		
34	2.1		
35	1.3		
36	0		
37	2.1		
38	1.6 to 2.6		
39	5.0		
40	3.0		
41	3.1		
42	2.5 to 2.9		
43	2.5 to 2.9		
44	2.5		
45	2.1		
46	1.4 to 2.9		
47	0 to 4.1		
48	0.7 to 2.2		
49	1.4 to 3.4		
50	2.1		
51	0.4 to 2.1		
52	2.1		
53	0.4 to 2.1		
54	2.1		
55	0 to 4.2		
56	4.2		
57	2.1		
58	0 to 5.0		
59	5.0		
60	5.0		
61	0		
62	5.0		
63	0		
64	5.0		
65	0		
66	0		
67	0 to 5.0		
68	4.9		
69	4.9		
70	4.9		
71	0		
72	0		
73	0		
74	0		
75	5.0		
76	5.0		
77	0		
78	1.0 to 3.0		
79	0.5 to 4.5		
80	5.0		
81	0		
82	0.4		
83	0		
84	0		
85	0.4		
86	0		
87	4.8		
88	4.8		
89	4.8		
90	0 to 5.0		

IC1010 (TA2153FN)

Pin No.	Voltage (V)
1	4.9
2	1.8
3	2.1
4	2.1
5	2.1
6	2.0
7	2.1
8	0
9	4.3
10	0
11	2.1
12	4.1
13	2.1
14	2.1
15	1.2
16	2.1
17	2.1
18	0.0
19	2.1
20	1.1
21	1.8
22	1.1
23	0.5
24	2.0
25	2.1
26	0
27	2.2
28	1.0 to 2.1
29	0
30	2.1

IC1011(LA6562)

Pin No.	Voltage (V)
1	4.3
2	4.3
3	7.3
4	3.3
5	3.3
6	3.4
7	3.2
8	2.5
9	3.5
10	0
11	3.7
12	3.4
13	3.8
14	3.7
15	7.3
16	2.0
17	2.0
18	2.0
19	2.0
20	2.0
21	2.0
22	2.0
23	2.0
24	2.0
25	1.0
26	0.6
27	1.0
28	2.0
29	0
30	2.0
31	2.0
32	2.0
33	2.0
34	2.5
35	2.5
36	2.0
37	0
38	3.2

E JACB ASSY

IC201 (PE8001)

Pin No.	Voltage (V)
1	0 to 3.1
2	0 to 3.1
3	0 to 3.1
4	0.3 to 4.4
5	0.5 to 2.7
6	0.8 to 4.8
7	0
8	5.0
9	5.0
10	0
11	0 to 2.5
12	0
13	2.5
14	0
15	5.0
16	2.2
17	0.7
18	0
19	0
20	5.0
21	3.0
22	0
23	0
24	0
25	0 to 4.9
26	0
27	0.5
28	3.2

IC211 (NJM2360M)

Pin No.	Voltage (V)
1	7.1
2	0 to 5.6
3	-7.5
4	-7.9
5	0.5
6	6.9
7	6.9
8	6.9

I CNTA ASSY

IC301 (PD5764A)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0	51	-31 to 5.0
2	0	52	-31 to 5.0
3	0	53	-31 to 5.0
4	0	54	-31 to 5.0
5	5.0	55	-31 to 5.0
6	5.0	56	-31 to 5.0
7	0	57	-31 to 5.0
8	0	58	-31 to 5.0
9	0	59	-31 to 5.0
10	0 to 5.0	60	-31 to 5.0
11	0 to 5.0	61	-31 to 5.0
12	0 to 5.0	62	-31 to 5.0
13	0 to 5.0	63	-31 to 5.0
14	0 to 5.0	64	-31 to 5.0
15	0 to 5.0	65	-31 to 5.0
16	0 to 5.0	66	-31 to 5.0
17	0	67	-31 to 5.0
18	5.0	68	-31 to 5.0
19	0 to 5.0	69	-31 to 5.0
20	0 to 5.0	70	-31 to 5.0
21	0	71	-31 to 5.0
22	0 to 4.3	72	-31 to 5.0
23	0 to 5.0	73	-31
24	5.0	74	-31
25	0	75	-31
26	0	76	-31 to 5.0
27	0	77	-31 to 5.0
28	0	78	-31 to 5.0
29	0 to 5.0	79	-31 to 5.0
30	0 to 5.0	80	-31 to 5.0
31	0 to 5.0	81	-31 to 5.0
32	0 to 5.0	82	-31 to 5.0
33	5.0	83	-31 to 5.0
34	5.0	84	-31 to 5.0
35	5.0	85	-31 to 5.0
36	5.0	86	-31 to 5.0
37	-31 to 5.0	87	-31 to 5.0
38	-31 to 5.0	88	-31 to 5.0
39	-31 to 5.0	89	-31
40	-31 to 5.0	90	0 to 5.0
41	-31 to 5.0	91	0 to 5.0
42	-31 to 5.0	92	0 to 5.0
43	-31 to 5.0	93	1.3
44	-31 to 5.0	94	0 to 5.0
45	-31 to 5.0	95	0 to 5.0
46	-31 to 5.0	96	0
47	-31 to 5.0	97	0
48	-31 to 5.0	98	5.0
49	-31 to 5.0	99	2.5
50	-31 to 5.0	100	0 to 5.0

K CNTB ASSY

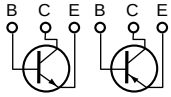
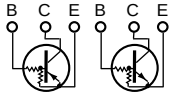
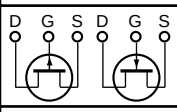
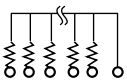
IC501 (PD5764A)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	5.0	51	-31 to 5.0
2	5.0	52	-31 to 5.0
3	5.0	53	-31 to 5.0
4	5.0	54	-31 to 5.0
5	5.0	55	-31 to 5.0
6	5.0	56	-31 to 5.0
7	0 to 5.0	57	-31 to 5.0
8	0 to 5.0	58	-31 to 5.0
9	0	59	-31 to 5.0
10	0 to 5.0	60	-31 to 5.0
11	0 to 5.0	61	-31 to 5.0
12	0 to 5.0	62	-31 to 5.0
13	0 to 5.0	63	-31 to 5.0
14	0 to 5.0	64	-31 to 5.0
15	0	65	-31 to 5.0
16	0	66	-31 to 5.0
17	0	67	-31 to 5.0
18	5.0	68	-31 to 5.0
19	0	69	-31 to 5.0
20	0	70	-31 to 5.0
21	0	71	-31 to 5.0
22	0 to 4.0	72	-31 to 5.0
23	0 to 5.0	73	-31
24	0 to 5.0	74	-31
25	5.0	75	-31
26	0 to 5.0	76	-31 to 5.0
27	0 to 5.0	77	-31 to 5.0
28	0 to 5.0	78	-31 to 5.0
29	0 to 5.0	79	-31 to 5.0
30	0 to 5.0	80	-31 to 5.0
31	0 to 5.0	81	-31 to 5.0
32	0 to 5.0	82	-31 to 5.0
33	5.0	83	-31 to 5.0
34	5.0	84	-31 to 5.0
35	0 to 5.0	85	-31 to 5.0
36	0 to 5.0	86	-31 to 5.0
37	-31 to 5.0	87	-31 to 5.0
38	-31 to 5.0	88	-31 to 5.0
39	-31 to 5.0	89	-31
40	-31 to 5.0	90	0 to 5.0
41	-31 to 5.0	91	0 to 5.0
42	-31 to 5.0	92	0 to 5.0
43	-31 to 5.0	93	5.0
44	-31 to 5.0	94	0 to 5.0
45	-31 to 5.0	95	0 to 5.0
46	-31 to 5.0	96	5.0
47	-31 to 5.0	97	0
48	-31 to 5.0	98	5.0
49	-31 to 5.0	99	2.5
50	-31 to 5.0	100	0 to 5.0

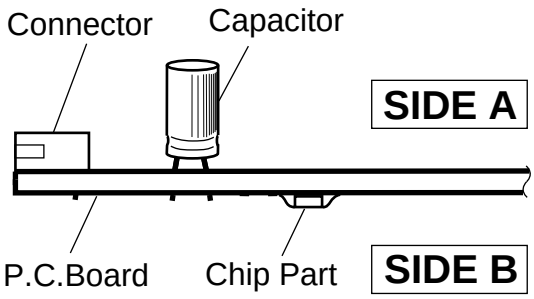
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

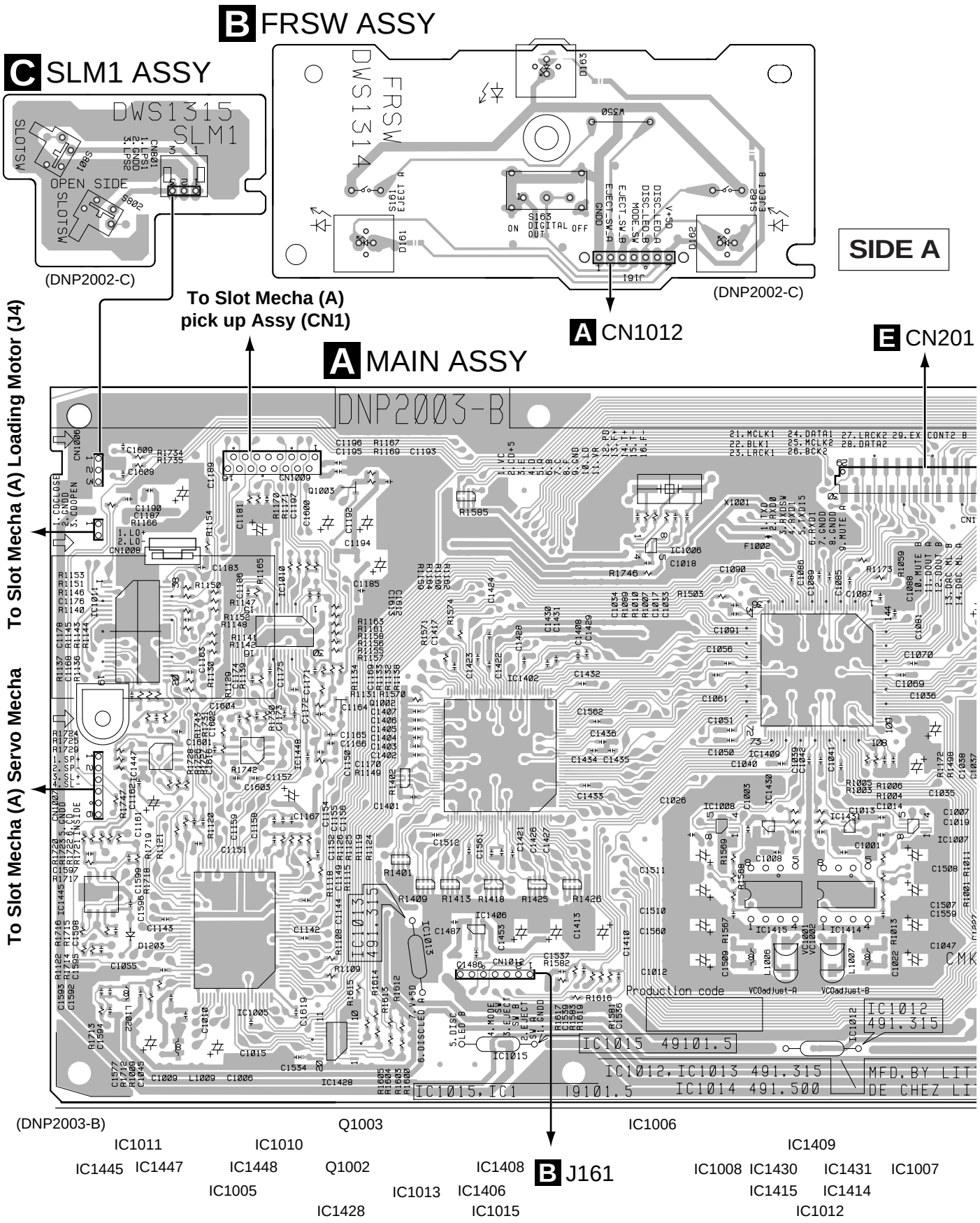
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



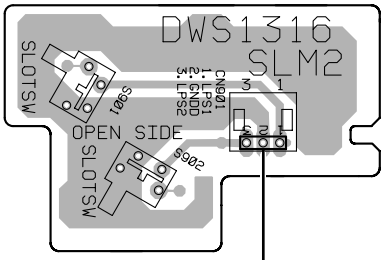
4.1 MAIN, FRSW, SLM1 and SLM2 ASSYS



5 6 7 8

A

D SLM2 ASSY



(DNP2002-C)

**To Slot Mecha (B)
Servo Mecha**

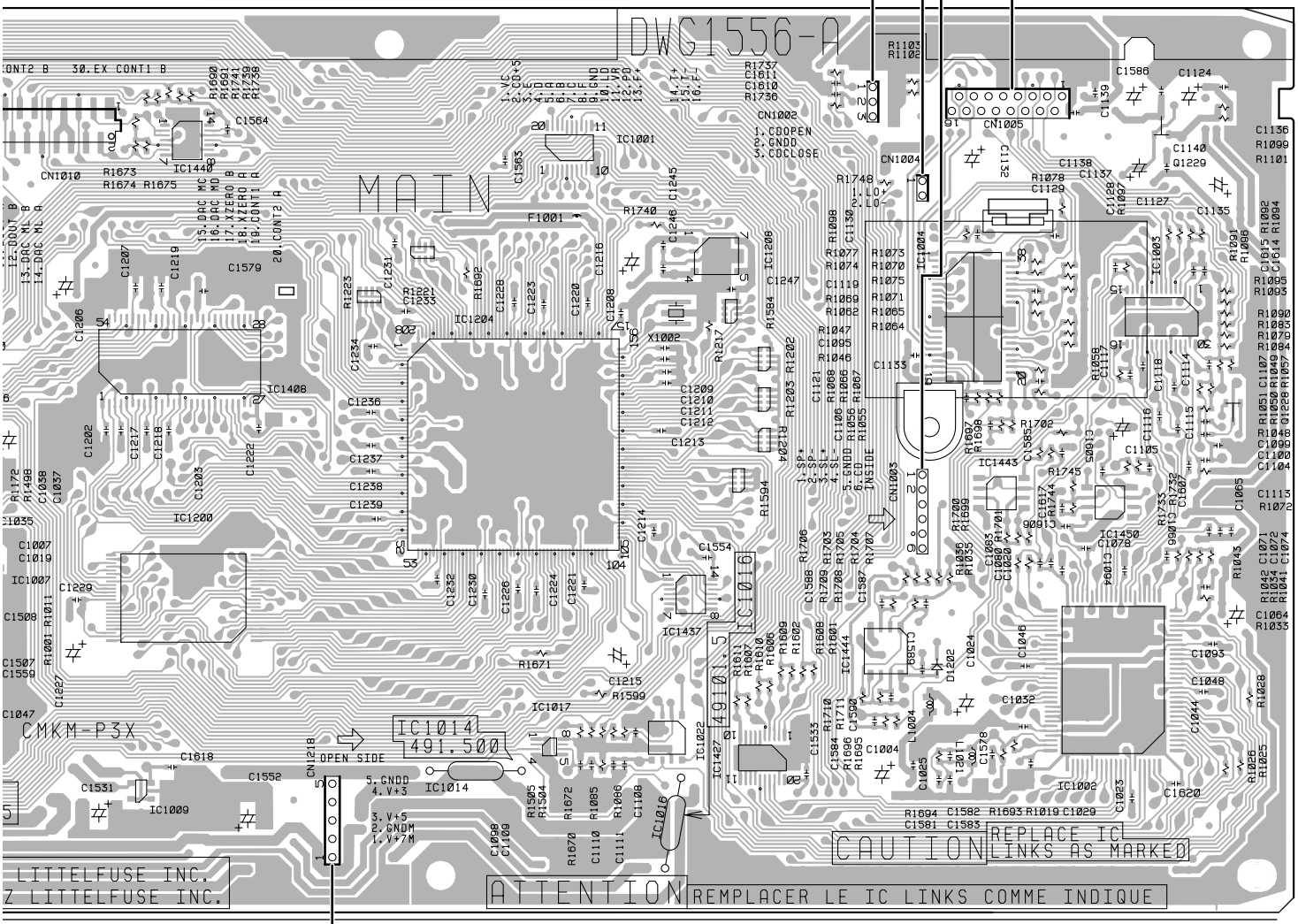
SIDE A

**To Slot Mecha (B)
Loading Motor (J4)**

**To Slot Mecha (B)
pick up Assy (CN1)**

J201

B



C

D

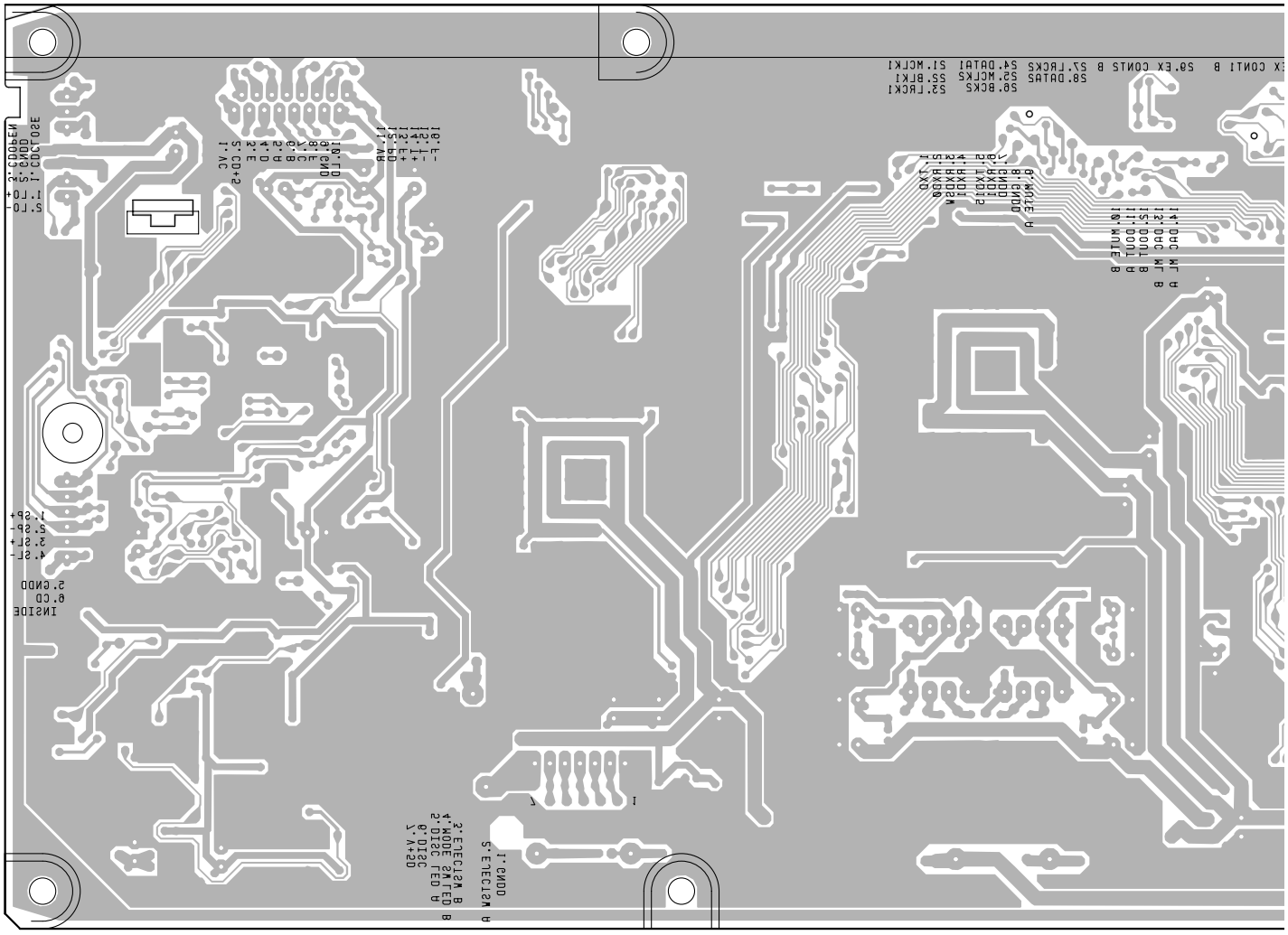
IC1440 IC1001 IC1208 Q1229
IC1408 IC1204 IC1004 IC1003
7 IC1200 **F** CN104 IC1437 IC1444 IC1443 IC1450 Q1228
IC1009 IC1014 IC1017 IC1022 IC1427 IC1002
IC1016

A D 37

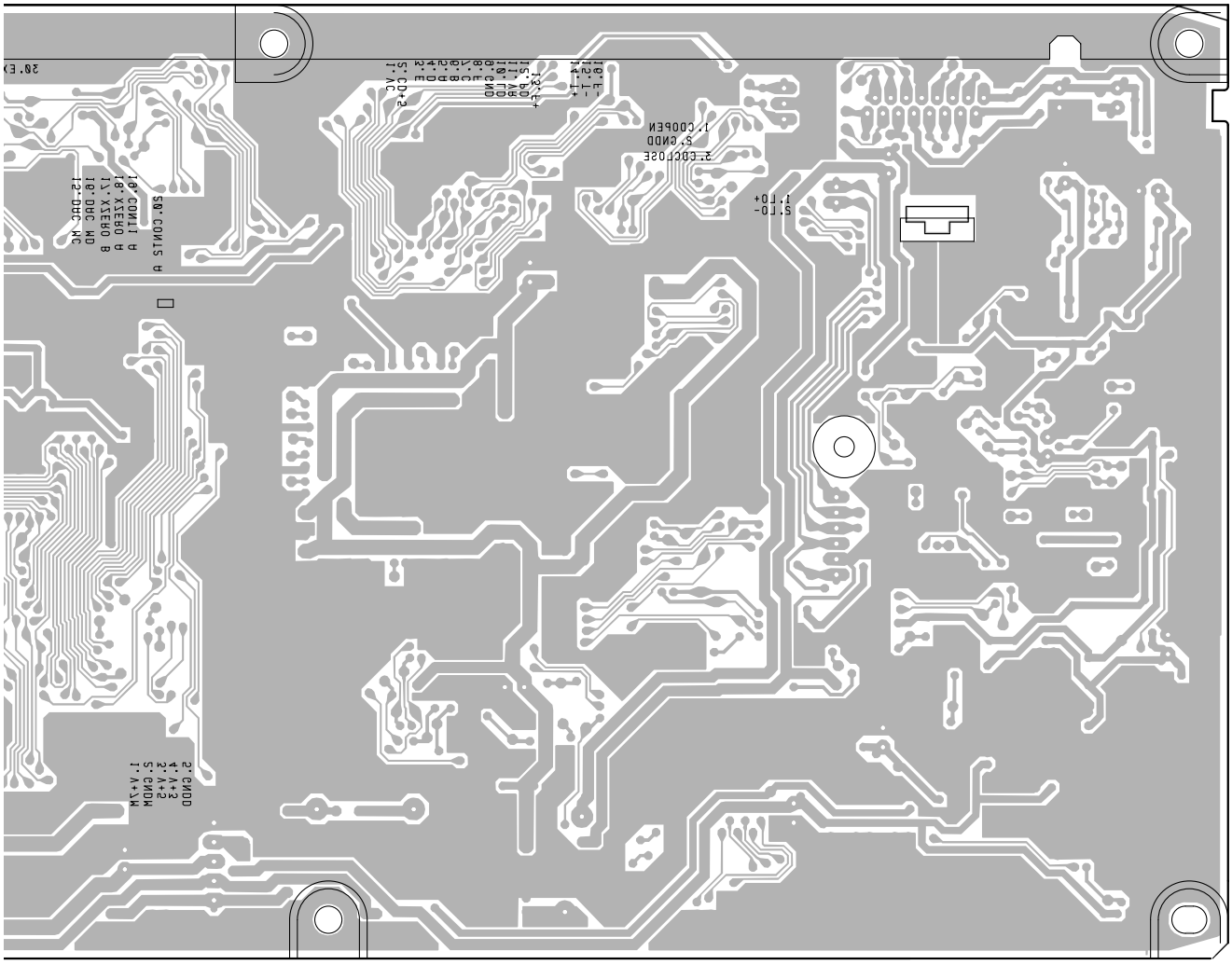
5 6 7 8

SIDE B

A MAIN ASSY



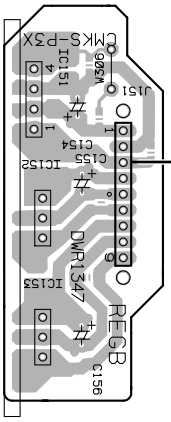
SIDE B



(DNP2003)

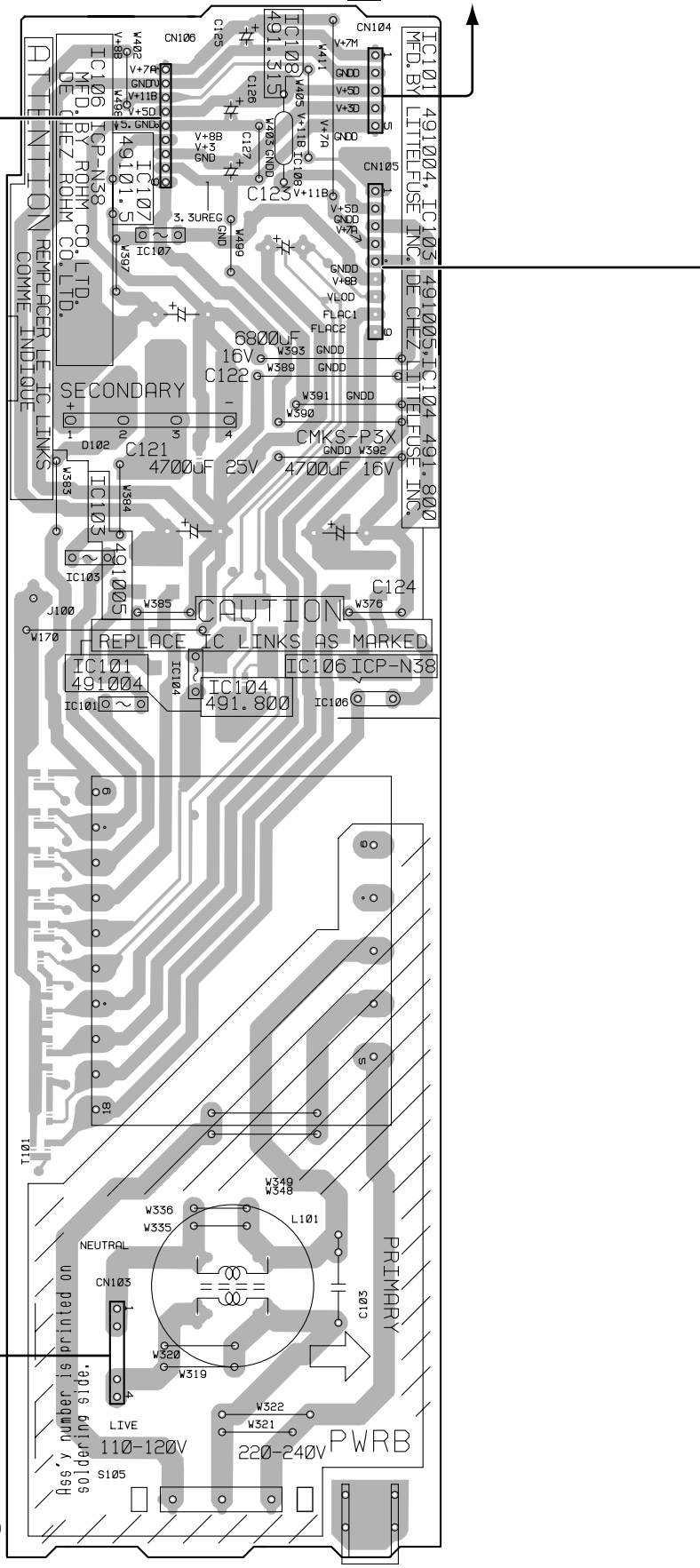
4.2 PWRB, REGB and ACIN ASSYS

H REGB ASSY



(DNP2002-C)

A CN1218



SIDE A

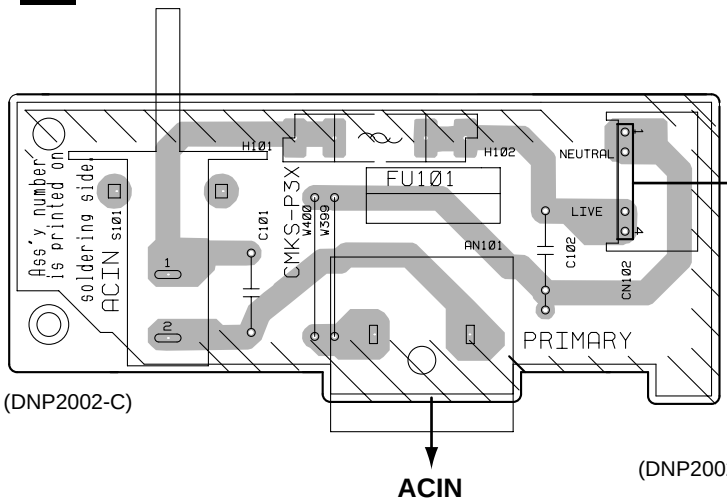
F PWRB ASSY

IC103

IC104

IC101 IC106

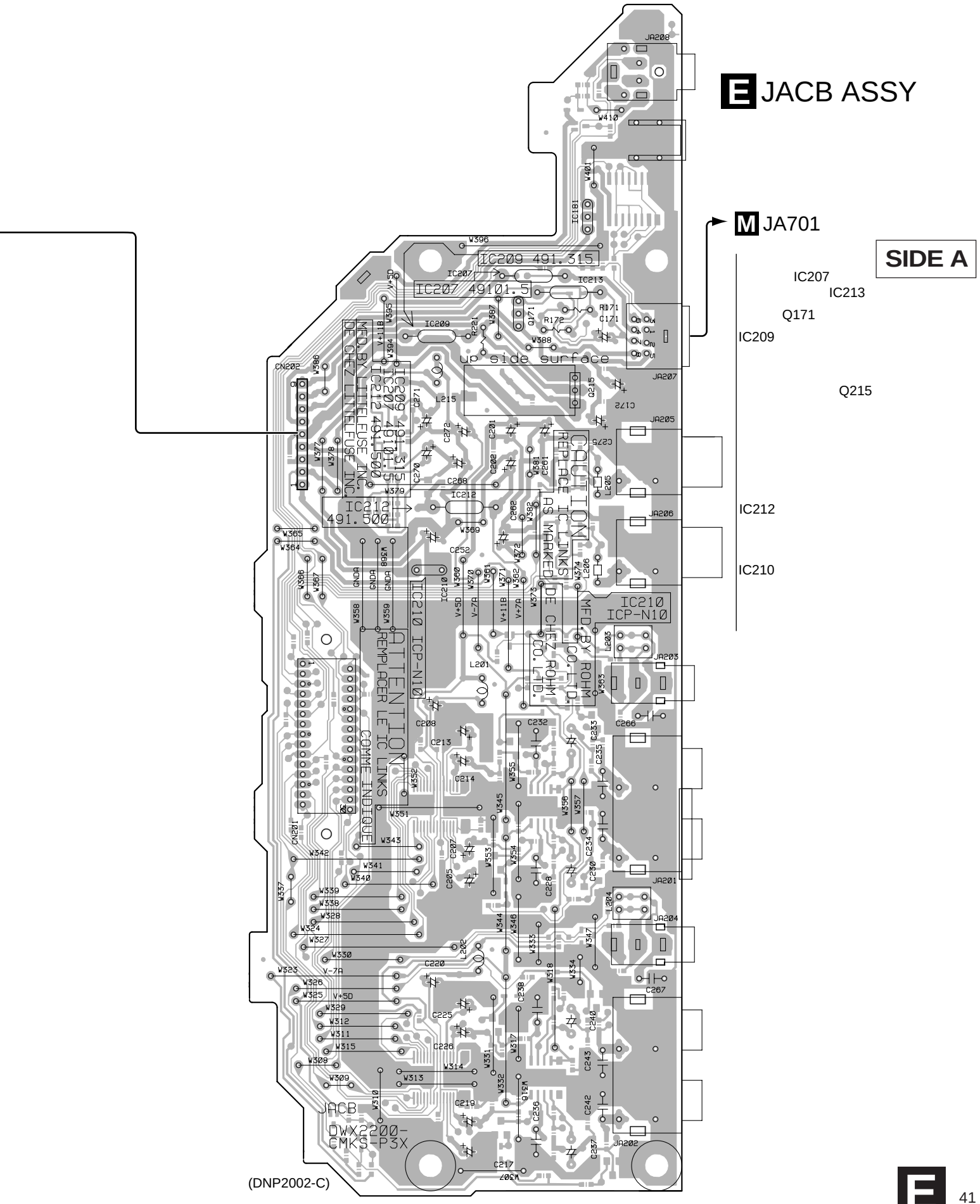
G ACIN ASSY



(DNP2002-C)

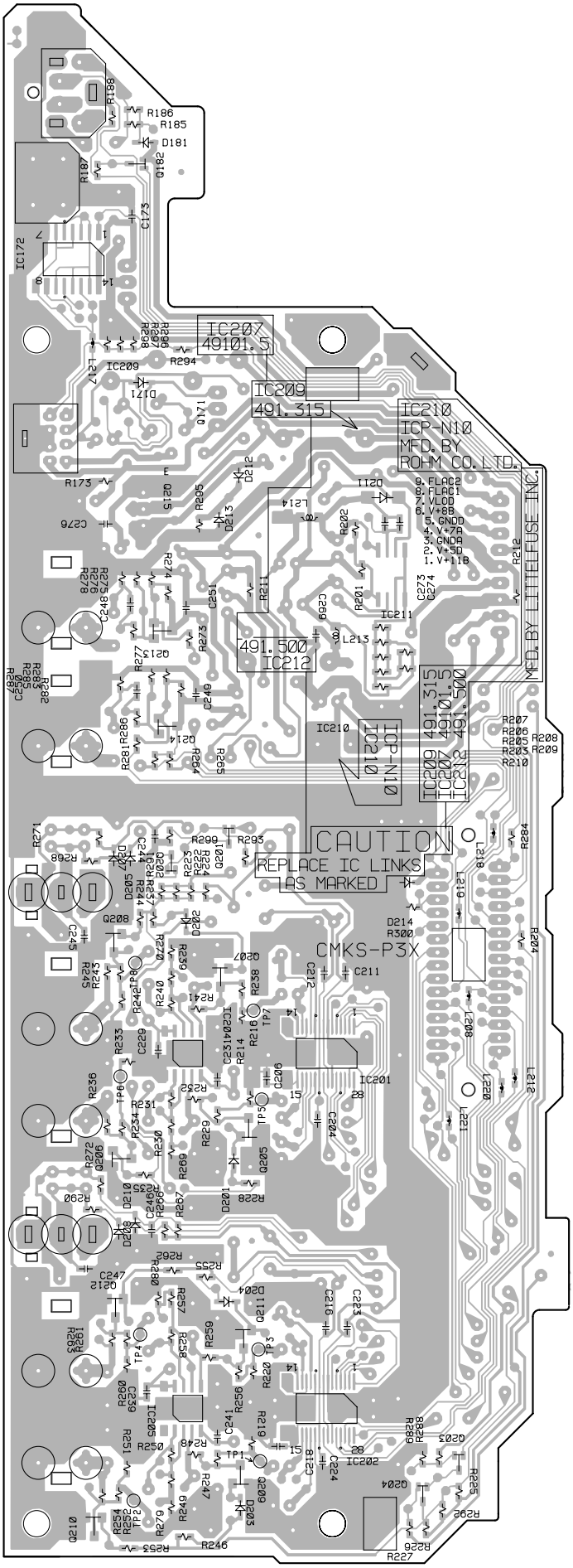
ACIN

(DNP2002-C)


E JACB ASSY
M JA701
SIDE A
IC207
IC213
Q171
IC209
Q215
IC212
IC210
JA208
JA207
JA205
JA206
JA203
JA201
JA204
JA202
IC209 491.315
IC207 49101.5
IC212 491.500
IC210 ICP-N10
up side surface
ATTENTION REPLACER LE IC LINKS COMME INDIQUE
ATTENTION REPLACE IC LINKS AS MARKED
JACB
DWX2200-
CMKS-P3X
(DNP2002-C)

EJACB ASSY

SIDE B



IC172

Q213

Q214

Q201

Q202

Q208

Q207

IC204 IC201

Q205

Q206

Q212

Q211

IC205 IC202

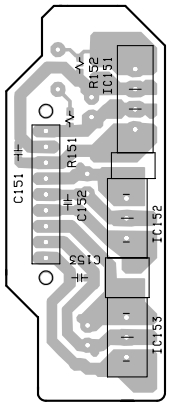
Q209 Q203

Q204

Q210

(DNP2002-C)

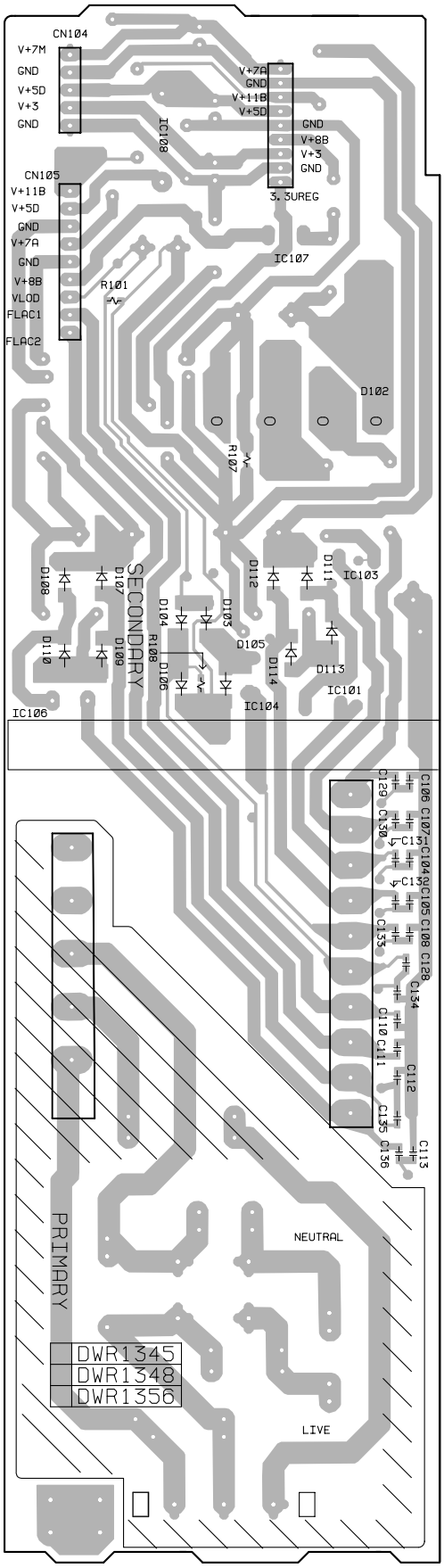
H REGB ASSY



(DNP2002-C)

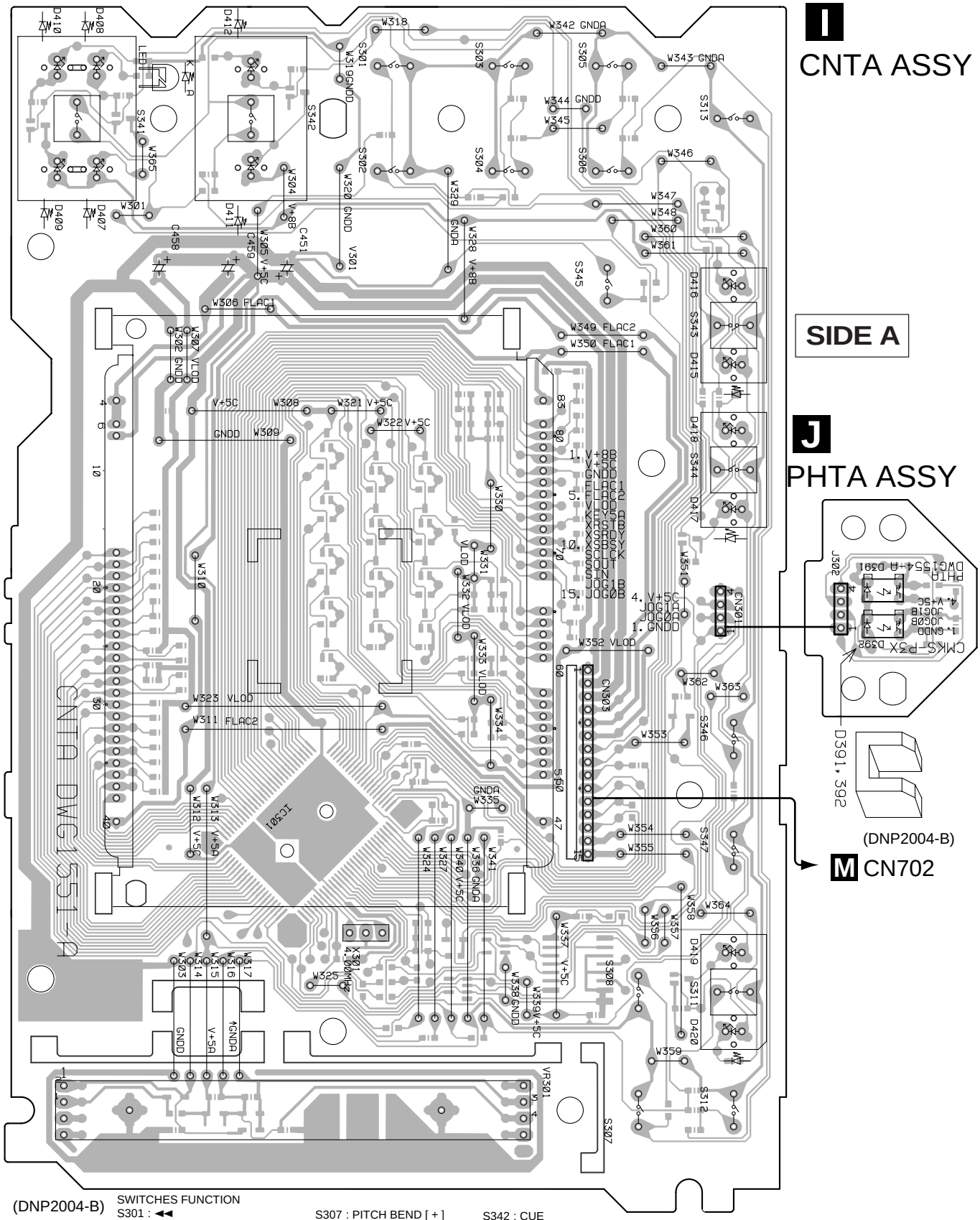
SIDE B

F PWRB ASSY



(DNP2002-C)

4.3 CNTA and PHTA ASSYS



(DNP2004-B) SWITCHES FUNCTION

S301 : ◄◄
S302 : ►►
S303 : I◄◄
S304 : ►►I
S305 : AUTO CUE/ TIME MODE
S306 : TEXT/ WAVE
S307 : PITCH BEND [+]
S308 : PITCH BEND [-]
S311 : MASTER TEMPO
S312 : TEMPO
S313 : ▲ (EJECT)
S341 : ►/II
S342 : CUE
S343 : IN/REALTIME CUE
S344 : OUT/ OUT ADJ
S345 : JOG MODE
S346 : RELOOP/ EXIT
S347 : EMERGENCY LOOP

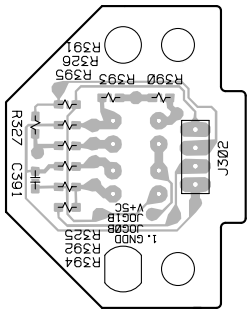
I

CNTA ASSY

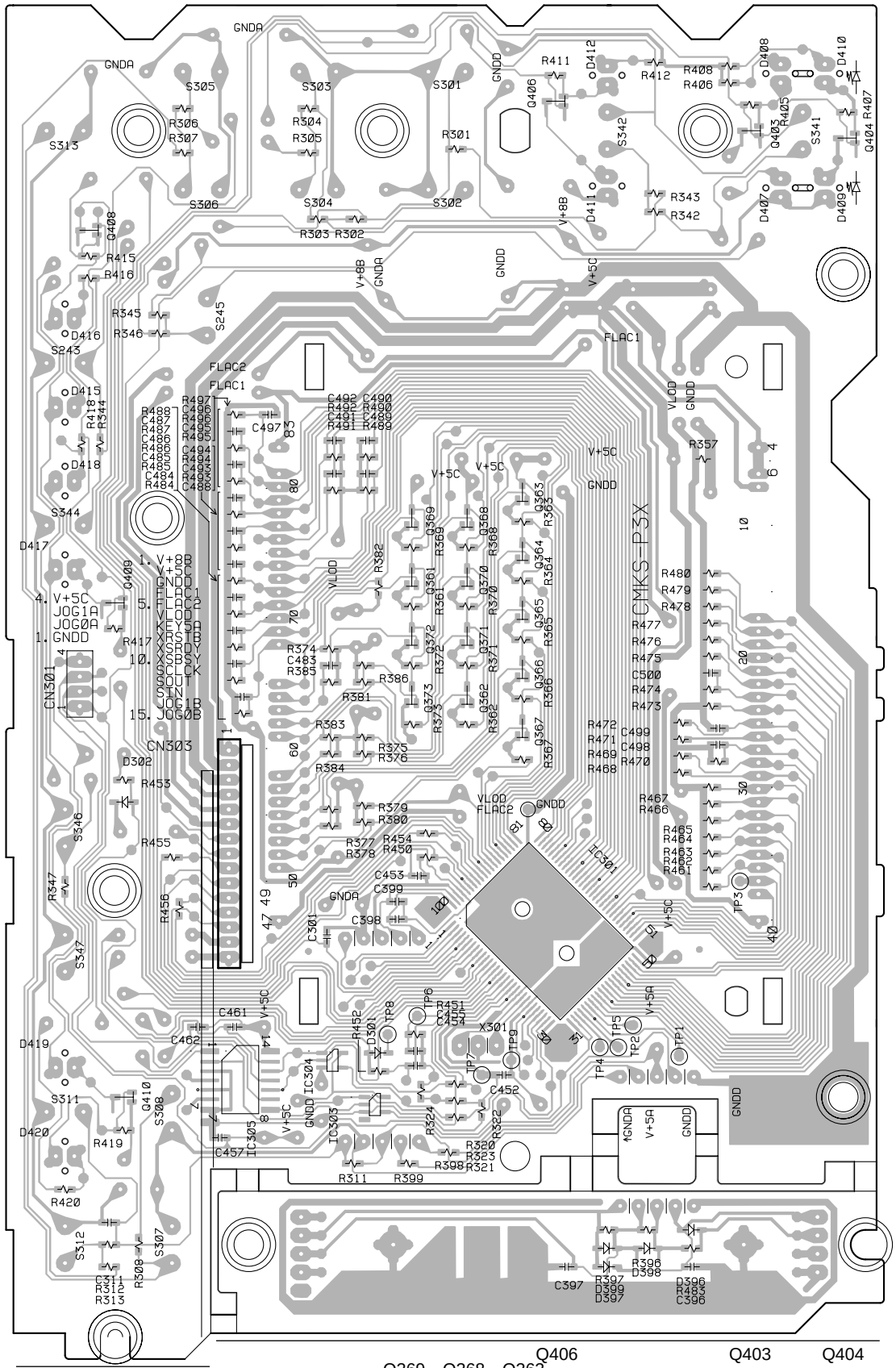
SIDE B

J

PHTA ASSY



(DNP2004-B)



Q408

Q409
Q410

IC305

IC304 IC303

Q369 Q368 Q363
Q361 Q370 Q364
Q372 Q371 Q365
Q373 Q362 Q366

Q367 IC301

Q406 Q403 Q404

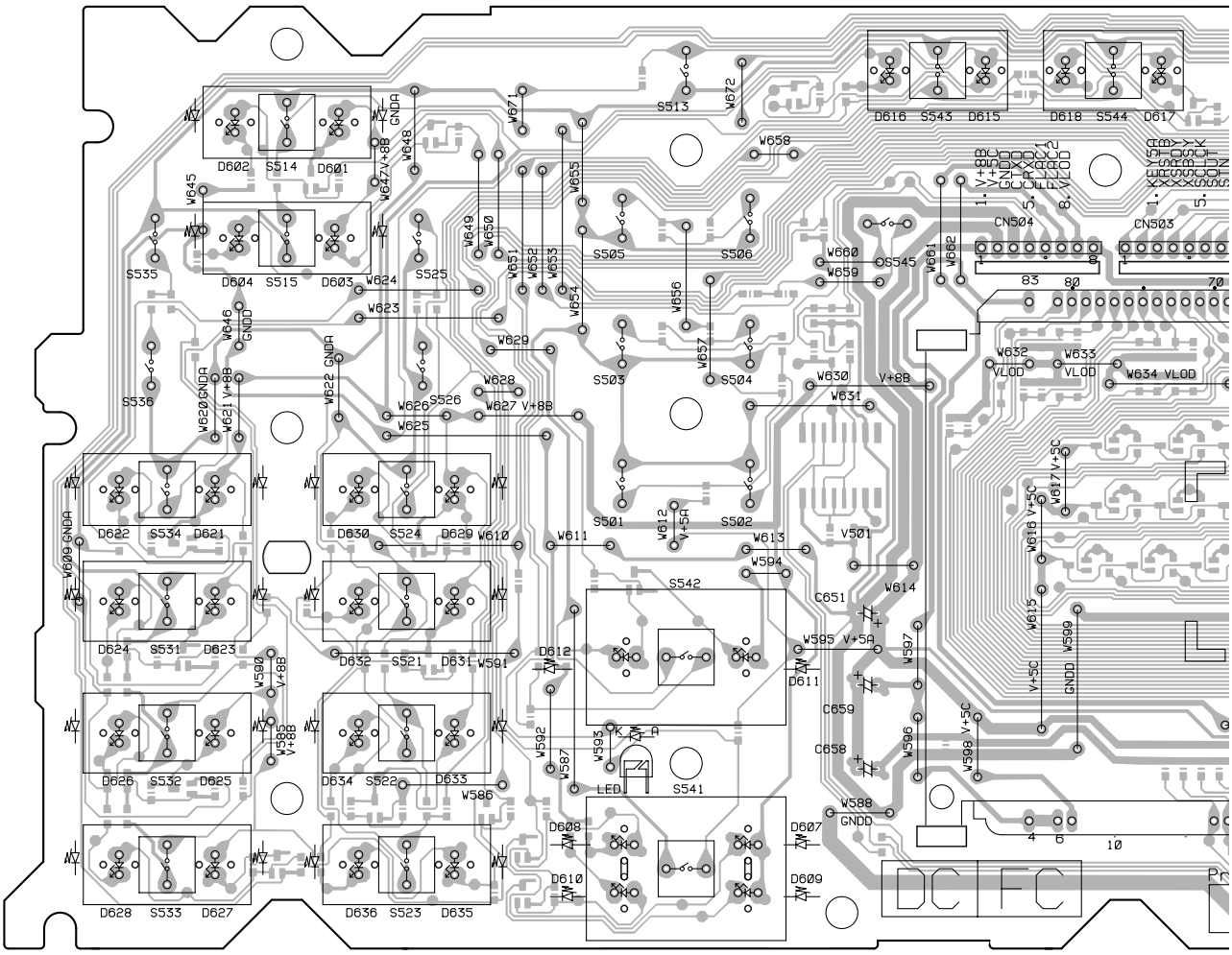
(DNP2004-B)

4.4 CNTB and PHTB ASSYS

SIDE A

CNTB ASSY

(DNP2002-B)



SWITCHES FINCTION

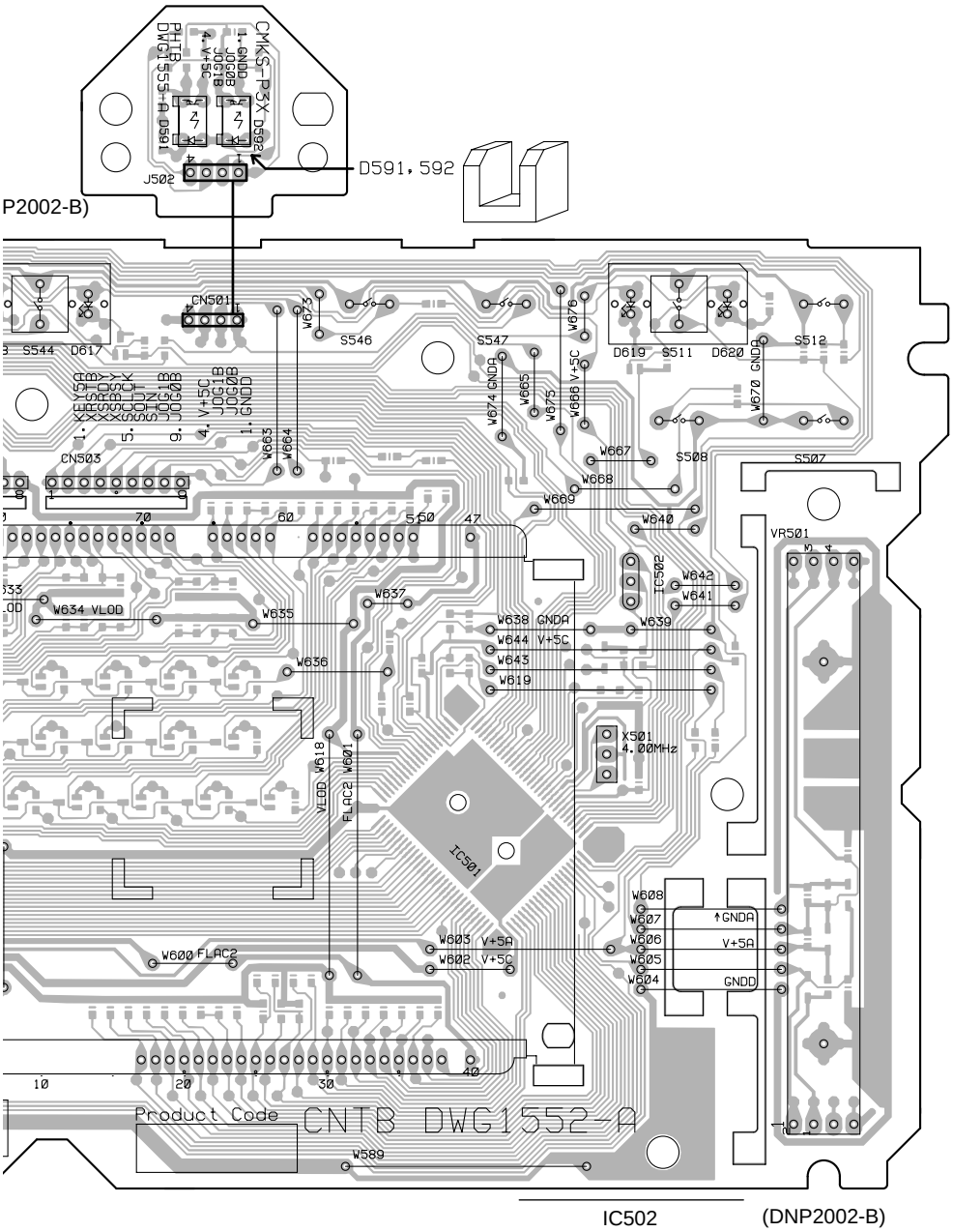
S501 : ◄◄
S502 : ►►
S503 : I◄◄
S504 : ►►I
S505 : AUTO CUE/ TIME MODE
S506 : TEXT/ WAVE
S507 : PITCH BEND [+]
S508 : PITCH BEND [-]

S511 : MASTER TEMPO
S512 : TEMPO RANGE
S513 : ▲ (EJECT)
S514 : BPM SYNC
S515 : RELAY PLAY
S521 : HOT CUE 1 - B
S522 : HOT CUE 2 - B
S523 : HOT CUE 3 - B

S524 : HOT CUE REC - B
S525 : BPM AUTO - B
S526 : BPM TAP - B
S531 : HOT CUE 1 - A
S532 : HOT CUE 2 - A
S533 : HOT CUE 3 - A
S534 : HOT CUE REC - A
S535 : BPM AUTO - A

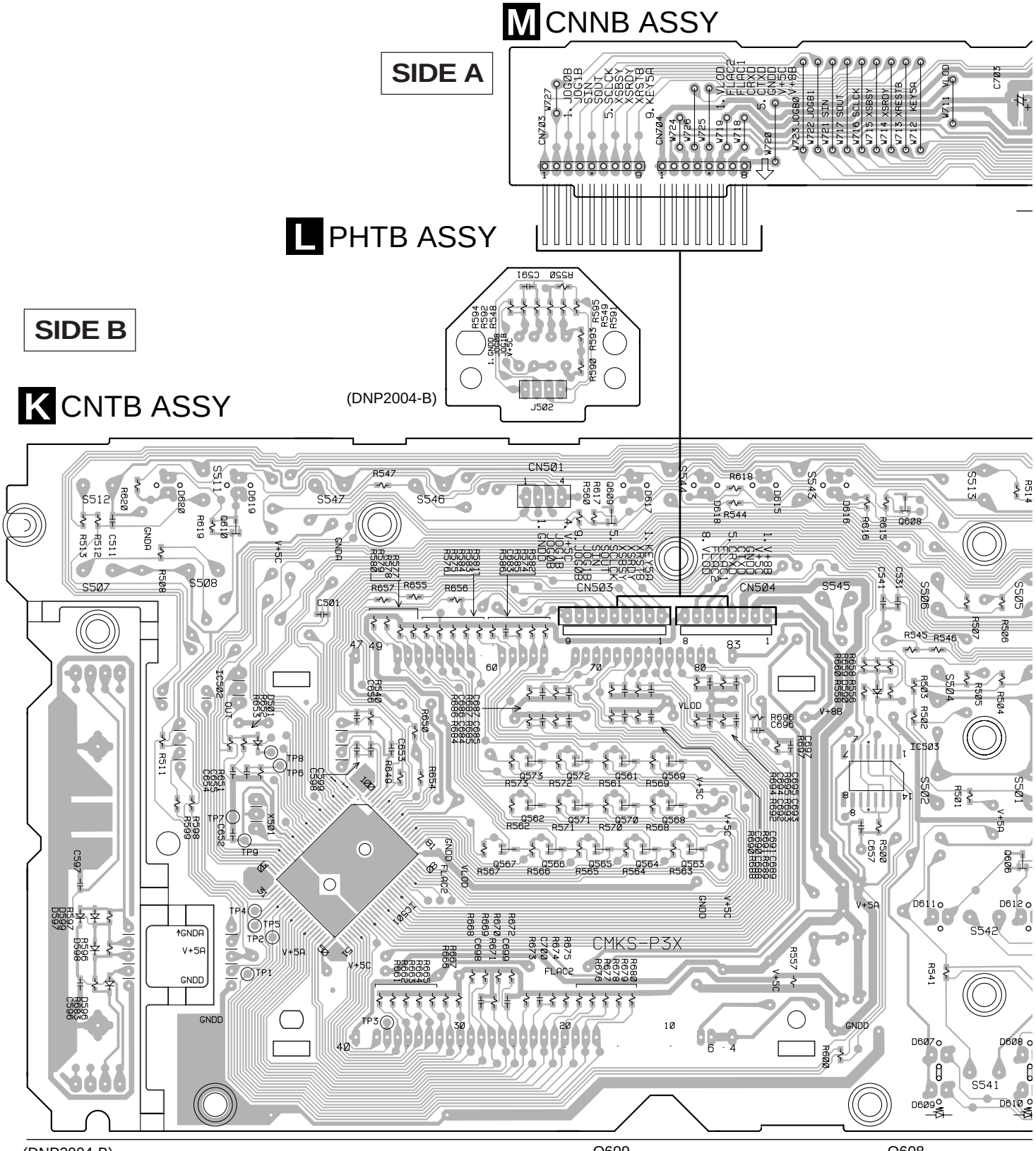
S536 : BPM TAP - A
S541 : ►/II
S542 : CUE
S543 : IN/ REALTIME CUE
S544 : OUT/ OUT ADJ
S545 : JOG MODE
S546 : RELOOP/ EXIT
S547 : EMERGENCY LOOP

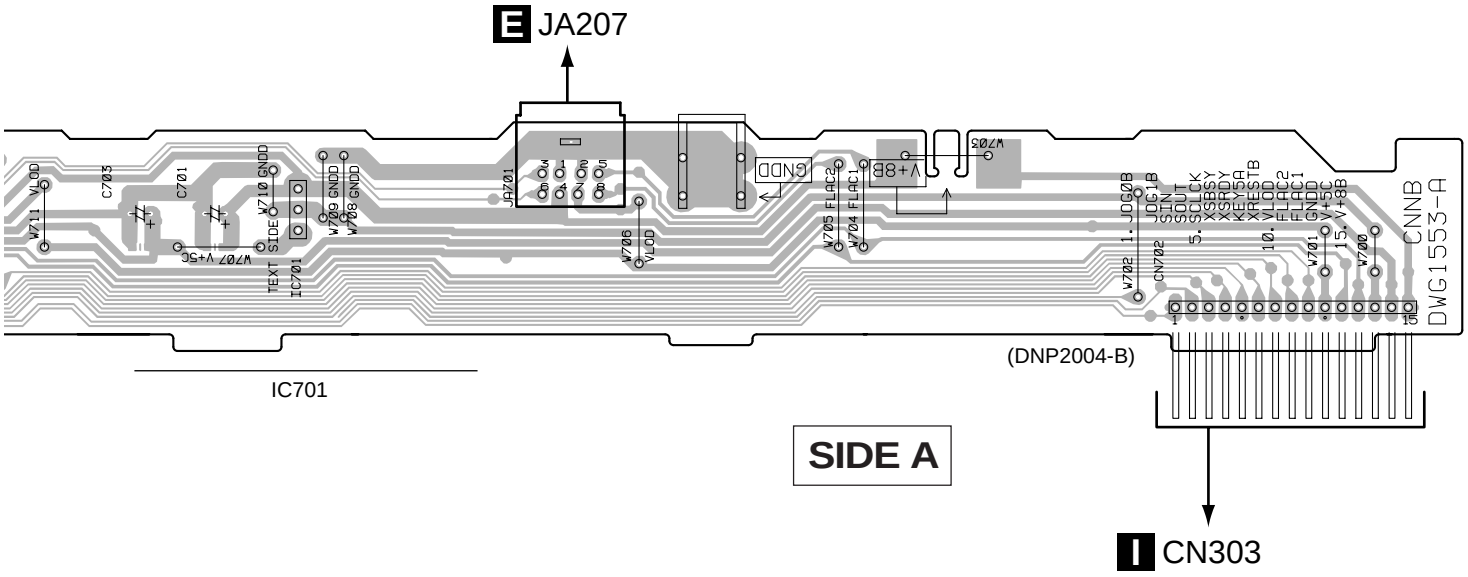
L PHTB ASSY

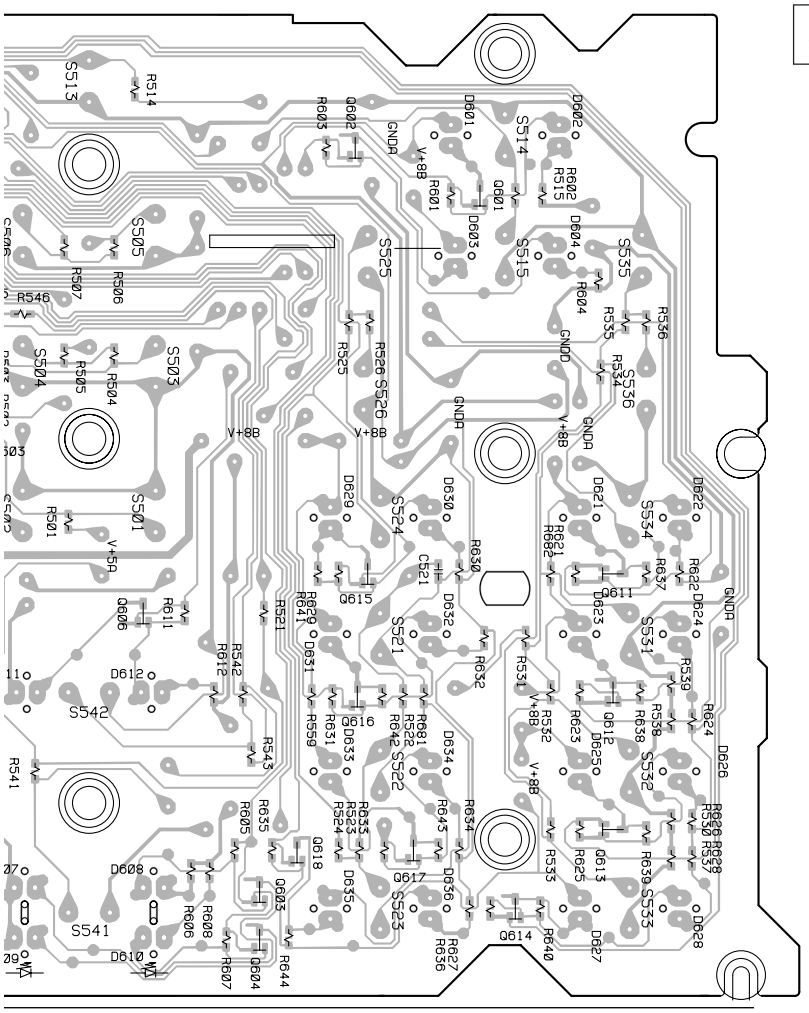


SIDE A

4.5 CNTB, PHTB and CNNB ASSYS




E JA207
CNNB
DWG1553-A
(DNP2004-B)
IC701
SIDE A
I CN303


SIDE B
Q606
Q602
Q601
Q615
Q611
Q603
Q616
Q612
Q604
Q618
Q617
Q614
Q613

5. PCB PARTS LIST

NOTES: ●*Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
●*The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
●*When ordering resistors, first convert resistance values into code form as shown in the following examples.*
Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).
560 Ω → 56 × 10¹ → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 × 10³ → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K
Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).
5.62k Ω → 562 × 10¹ → 5621 ..... RN1/4PC 5 6 2 1 F

• LIST OF WHOLE PCB ASSEMBLIES (FOR CMX-3000)

Mark	Symbol and Description	Part No.			Remarks
		CMX-3000/ KUCXJ	CMX-3000/ WYXJ	CMX-3000/ RLBXJ	
	MAIN ASSY	DWG1556	DWG1556	DWG1556	
NSP	POWB ASSY	DWM2130	DWM2127	DWM2131	
	├ PWRB ASSY	DWR1345	DWR1345	DWR1348	
	├ ACIN ASSY	DWR1349	DWR1346	DWR1346	
	├ REGB ASSY	DWR1357	DWR1347	DWR1347	∗1
	├ FRSW ASSY	DWS1314	DWS1314	DWS1314	
	├ SLM1 ASSY	DWS1315	DWS1315	DWS1315	
	├ SLM2 ASSY	DWS1316	DWS1316	DWS1316	
	└ JACB ASSY	DWX2214	DWX2200	DWX2200	∗2

∗1: Although DWR1357 and DWR 1347 are different in part number, they consist of the same components.
∗2: Although DWX2214 and DWX2200 are different in part number, they consist of the same components.

• LIST OF PCB ASSEMBLIES (FOR CU-V163)

NSP	CONT ASSY	DWM2129
	├ CNTA ASSY	DWG1551
	├ CNTB ASSY	DWG1552
	├ CNNB ASSY	DWG1553
	├ PHTA ASSY	DWG1554
	└ PHTB ASSY	DWG1555

• CONTRAST OF PCB ASSEMBLIES

F PWRB ASSY

DWR1345 and DWR1348 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		DWR1345	DWR1348	
	S105 (Voltage Selector)	Not used	DSA1026	

H ACIN ASSY

DWR1349 and DWR1346 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		DWR1349	DWR1346	
	AN101 (Power Socket) AN101 (1P AC Inlet)	AKP7032 Not used	Not used BKP1046	

• PARTS LIST FOR CMX-3000/ KUCXJ

Mark	No.	Description	Part No.

A MAIN ASSY

SEMICONDUCTORS

⚠	IC1012, IC1013	(315 mA)	AEK7059
⚠	IC1014	(500 mA)	AEK7060
	IC1015, IC1016	(1.5 A)	AEK7065
	IC1414, IC1415		BA7042
	IC1200		DYW1701
	IC1204		HD6417709AF100B
	IC1408		K4S281632C-TC1H
	IC1004, IC1011		LA6562
	IC1022		M51957BFP
	IC1208		MM1561JF
	IC1444, IC1445, IC1448, IC1450		NJM2100M
	IC1406		NJM2870F18
	IC1009		NJM2870F25
	IC1443, IC1447		NJM2903M
	IC1003, IC1010		TA2153FN
	IC1440		TC74VHC02FT
	IC1437		TC74VHC04FT
	IC1427, IC1428		TC74VHCT245AFT
	IC1001		TC74VHCT541AFT
	IC1430, IC1431		TC7SU04FU
	IC1017		TC7W08FU
	IC1007, IC1008		TC7WT241FU
	IC1006		TC7WU04FU
	IC1002, IC1005		TC9495F
	IC1409		XC2S30-5TQ144C
	IC1402		XCA56367PV150
	Q 1003, Q 1229		2SA1036K
	Q 1002, Q 1228		DTC114TK
	D1202, D1203		UDZ2.0B

COILS AND FILTERS

	L1004, L1006, L1007, L1009	DTL1024
	F1001, F1002	DTL1090
	L1021, L1022	LCYAR68J2520

CAPACITORS

	C1117, C1174, C1579, C1582, C1593	CCSRCH100D50
	C1104, C1106, C1166, C1168, C1404	CCSRCH101J50
	C1421, C1424, C1430, C1435	CCSRCH101J50
	C1033, C1034	CCSRCH120J50
	C1581, C1592	CCSRCH121J50
	C1587, C1588, C1597, C1599	CCSRCH180J50
	C1121, C1178	CCSRCH270J50
	C1099, C1100, C1164, C1165	CCSRCH330J50
	C1064, C1128, C1149, C1186	CCSRCH470J50
	C1074, C1156, C1616, C1617	CCSRCH471J50
	C1107, C1169	CCSRCK2R0C50
	C1004, C1006, C1009, C1024	CEAT101M10
	C1035, C1036, C1093, C1105, C1124	CEAT101M10
	C1135, C1137, C1161, C1167, C1181	CEAT101M10
	C1192, C1194, C1206, C1215, C1216	CEAT101M10
	C1227, C1410, C1413, C1453, C1531	CEAT101M10
	C1552	CEAT101M10
	C1132, C1189	CEAT221M10
	C1012, C1047, C1559, C1560	CEJQ101M6R3
	C1507, C1510	CEJQ1R0M50
	C1508, C1511	CEJQ220M25
	C1013, C1014, C1017	CKSRYB102K50
	C1010, C1015, C1019, C1020, C1023	CKSRYB103K50
	C1025, C1026, C1029, C1032	CKSRYB103K50
	C1044-C1046, C1048, C1055, C1065	CKSRYB103K50
	C1071, C1094, C1095, C1098	CKSRYB103K50
	C1108-C1111, C1118, C1127, C1136	CKSRYB103K50
	C1139, C1142-C1144, C1150, C1151	CKSRYB103K50
	C1154, C1162, C1163, C1175, C1185	CKSRYB103K50
	C1193, C1196, C1401-C1403	CKSRYB103K50
	C1405-C1408, C1417, C1422, C1423	CKSRYB103K50
	C1426-C1428, C1431-C1434, C1436	CKSRYB103K50
	C1486, C1512, C1533, C1534	CKSRYB103K50
	C1536, C1537, C1539, C1554	CKSRYB103K50
	C1561-C1564, C1577, C1578	CKSRYB103K50
	C1583-C1585, C1589, C1590	CKSRYB103K50
	C1594-C1596, C1598, C1601, C1603	CKSRYB103K50
	C1606, C1608-C1615, C1619, C1620	CKSRYB103K50
	C1001, C1003, C1007, C1008, C1018	CKSRYB104K25
	C1022, C1037-C1042, C1050, C1051	CKSRYB104K25
	C1056, C1061, C1069, C1070, C1081	CKSRYB104K25
	C1085-C1091, C1113, C1114, C1129	CKSRYB104K25
	C1133, C1138, C1140, C1170, C1171	CKSRYB104K25
	C1183, C1190, C1195, C1197	CKSRYB104K25
	C1202, C1203, C1207-C1209	CKSRYB104K25
	C1212-C1214, C1217-C1224, C1226	CKSRYB104K25
	C1228-C1234, C1236-C1239, C1245	CKSRYB104K25
	C1509, C1618	CKSRYB104K25
	C1066, C1152	CKSRYB153K50
	C1072, C1155	CKSRYB222K50
	C1115, C1116, C1172, C1173	CKSRYB224K16
	C1429	CKSRYB332K50
	C1078, C1157	CKSRYB333K16
	C1210, C1211, C1246	CKSRYB471K50
	C1080, C1083, C1158, C1159, C1247	CKSRYB473K50
	C1487	CKSRYB473K50
	C1119, C1176	CKSRYB562K50
	VC1001, VC1002 (40P)	VCM1010

RESISTORS

	R1202-R1204, R1221, R1223	RAB4C223J
	R 1401,R 1402,R 1409,R 1413,R 1418	RAB4C223J
	R 1425,R 1426,R 1584,R 1585,R 1594	RAB4C223J
	R1086	RN1/16SE3301D
	R1085	RN1/16SE4701D
	R1711, R1715	RS1/16S1502F
	R1703, R1704, R1721, R1723	RS1/16S3301F
	R1706, R1707, R1719, R1720	RS1/16S3902F
	R1710, R1716	RS1/16S4701F
	R1705, R1722	RS1/16S5600F
	R1708, R1709, R1717, R1718	RS1/16S8202F
	Other Resistors	RS1/16S□□□ J

OTHERS

CN1005, CN1009	FPC CONNECTOR	16FMZ-ST
CN1012	7P JUMPER CONNECTOR	52147-0710
CN1004, CN1008	CONNECTOR POST	B2B-PH-K-S
CN1002, CN1006	CONNECTOR POST	B3B-PH-K-S
CN1218	5P TOP POST	B5B-EH

Mark	No.	Description	Part No.
	CN1003, CN1007	CONNECTOR	B6B-PH-K-S
	X1002	CRYSTAL RESONATOR(12MHz)	DSS1132
	CN1010	CONNECTOR	VKN1626
	X1001	CRYSTAL RESONATOR(16.9MHz)	VSS1084

B FRSW ASSY

SEMICONDUCTORS

	D 161 ,D 162	SLR-343MC(NPQ)
	D163	SLR-343VC(NPQ)

SWITCHES

	S161, S162	ASG7013
	S163	DSH1049

CAPACITORS

	C161	CKSRYB103K50

RESISTORS

	Other Resistors	RS1/16S□□□ J

OTHERS

	161	7P CABLE HOLDER	51048-0700
	J 161	JUMPER WIRE	D20PDY0720E

C SLM1 ASSY

SWITCHES AND RELAYS

	S801, S802	DSG1017

OTHERS

	CN801	CONNECTOR POST	S3B-PH-K-S

D SLM2 ASSY

SWITCHES AND RELAYS

	S901, S902	DSG1017

OTHERS

	CN901	CONNECTOR POST	S3B-PH-K-S

E JACB ASSY

SEMICONDUCTORS

⚠	IC209 (315 mA)	AEK7059
⚠	IC212 (500 mA)	AEK7060
⚠	IC207 (1.5 A)	AEK7065
⚠	IC210 (0.4 A)	ICP-N10
	IC211	NJM2360M
	IC204, IC205	NJM4558MD
	IC181	NJM78L05A
	IC201, IC202	PE8001A
	IC172	TC74ACT04F
	Q171	2SB1237X
	Q215	2SB1375
	Q213, Q214	2SC2412K
	Q205–Q212	2SD2114K
	Q 201 ,Q 203	DTA124EUA
	Q182	DTA143EUA
	Q 202 ,Q 204	DTC124EUA
	D181, D201–D204	1SS355
	D211	EC10QS04
	D212	UDZ33B
	D 205 ,D 207 ,D 208 ,D 210	UDZS10B
	D214	UDZS5.1B
	D171	UDZS8.2B

COILS AND FILTERS

	L215	DTL1083
	L213, L214	LCTA470J2520
	L201, L202	LRCA4R7J
	L208, L212, L217–L221	VTL1084

CAPACITORS

	C273	CCSRCH181J50
	C274	CCSRCH220J50
	C202, C208, C220, C268	CEAT101M10
	C270, C271	CEAT101M10
	C171	CEAT1R0M50
	C275	CEAT330M50
	C207, C214, C219, C226, C262	CEAT470M16
	C205, C213, C217, C225	CEAT470M25
	C172	CEAT470M50
	C201, C261, C272	CEHAR330M10
	C230, C233, C237, C240	CEJQNP220M16
	C266, C267	CKCYF103Z50
	C248, C250	CKSRYB103K50
	C173, C204, C206, C211, C212	CKSRYB104K25
	C216, C218, C223, C224, C229	CKSRYB104K25
	C231, C239, C241, C244–C247	CKSRYB104K25
	C249, C251, C269	CKSRYB104K25
	C276	CKSRYB473K50
	C228, C232, C234–C236, C238	CQMA152J50
	C242, C243	CQMA152J50

RESISTORS

	R221	RD1/2VM222J
	R171, R172	RD1/2VM560J
	R231, R240, R250, R258	RN1/16SE2202D
	R201	RS1/16S2202F
	R202	RS1/16S4701F
	Other Resistors	RS1/16S□□□ J

OTHERS

	208	JACK	AKN7003
	JA201, JA202	2P JACK	DKB1053
	JA205, JA206	JACK BOARD	PKB1033
	JA203, JA204	JACK/12V	PKN1004
	207	I/O JACK	VKN1070
	CN201	B TO B CONNECTOR 30P	VKN1627
	0	SCREW PLATE	VNE1948
		PCB BINDER	VEF1040

Mark	No.	Description	Part No.

F PWRB ASSY

SEMICONDUCTORS

⚠	IC104	(800 mA)	AEK7008
⚠	IC107	(1.5 A)	AEK7011
⚠	IC101	(4 A)	AEK7018
⚠	IC103	(5 A)	AEK7019
⚠	IC108	(315 mA)	AEK7059
⚠	IC106	(1.5 A)	ICP-N38
⚠	D 103 -D 106		1SR154-400
⚠	D102		D3SBA20(B)
	D111–D114		RB060L-40
⚠	D107–D110		RB160L-40

COILS AND FILTERS

⚠	L101		VTL-004

CAPACITORS

⚠	C103	(0.01 μF/ AC275V)	ACE7027
	C 125 -C 127		CEAT101M10
	C123		CEHAT221M2A
	C124		CEHAT472M16
	C121		CEHAT472M25
	C122		CEHAT682M16
	C104–C108, C110–C113		CKSRYB473K50
	C128–C136		CKSRYB473K50

RESISTORS

	Other Resistors		RS1/16S□□□ J

OTHERS

	CN106	9P JUMPER CONNECTOR	52147-0910
⚠	CN103	SOCKET 4P	AKP7132
	CN104	5P TOP POST	B5B-EH
	CN105	9P TOP POST	B9B-EH
	0	SCREW PLATE	VNE1948

G ACIN ASSY

SWITCHES AND RELAYS

⚠	S101		RSA1001

CAPACITORS

⚠	C102	(0.01μF/ AC275V	ACE7027
⚠	C101	(10000PF/AC250V)	ACG7033

OTHERS

⚠	CN102	PLUG 4P	AKM7055
⚠	AN101	POWER SOCKET	AKP7032
⚠	H101, H102	FUSE CLIP	AKR1004

Mark	No.	Description	Part No.

H REGB ASSY

SEMICONDUCTORS

⚠	IC153		BA033T
⚠	IC152		BA05T
⚠	IC151		PQ15RW21

CAPACITORS

	C155, C156		CEHAT101M10
	C154		CEHAT470M16
	C151–C153		CKSRYB103K50

RESISTORS

	R152		RN1/16SE2201D
	R151		RN1/16SE3901D

OTHERS

	151	9P CABLE HOLDER	51048-0900
	J 151	JUMPER WIRE	D20PDY0910E
	0	REGURATOR PLATE	DNH2507
		SCREW	BBZ30P060FMC

Mark	No.	Description	Part No.

I CNTA ASSY

SEMICONDUCTORS

	IC301	PD5764A
	IC305	TC74HC14AF
	IC303, IC304	TC7S86F
	Q361–Q373, Q403, Q404 ,Q406	2SC4081
	Q408–Q410	2SC4081
	D301, D302, D396–D399	1SS355
	D411, D412	SLI-343URCW(RST)
	D415–D420	SLI-343YCW(RST)
	D407–D410	TLGE68TG(NP)

SWITCHES

	S301–S308, S311–S313	ASG7013
	S341–S347	ASG7013

CAPACITORS

	C451	CEAT101M10
	C458	CEAT1R0M50
	C459	CEAT220M50
	C301, C311, C396–C399	CKSRYB102K50
	C452–C455, C457	CKSRYB103K50
	C483–C500	CKSRYB221K50
	C461, C462	CKSRYB471K50

RESISTORS

	R396, R397	RS1/16S2201F
	VR301 (50kΩ-B x2)	DCV1011
	Other Resistors	RS1/16S□□□ J

OTHERS

	CN303 CONNECTOR	52084-1510
	CN301 4P JUMPER CONNECTOR	52147-0410
	V301 VACUUM FL DISPLAY	DEL1047
	X301 CERAMIC RESONATOR	DSS1131
	FL HOLDER	DNK3956

J PHTA ASSY

SEMICONDUCTORS

	D391, D392	GP1S94

CAPACITORS

	C391	CKSRYB103K50

RESISTORS

	Other Resistors	RS1/16S□□□ J

OTHERS

	J 302 JUMPER WIRE	D20PWY0415E

K CNTB ASSY

SEMICONDUCTORS

	IC501	PD5764A
	IC502	PST994D
	IC503	TC74AC04F
	Q561–Q573, Q601–Q604, Q606	2SC4081
	Q608–Q618	2SC4081
	D501, D596–D599	1SS355
	D611, D612, D621, D 622	SLI-343URCW(RST)
	D629, D 630	SLI-343URCW(RST)
	D601–D604, D615–D620	SLI-343YCW(RST)
	D623–D628, D631–D636	SLI-343YCW(RST)
	D607–D610	TLGE68TG(NP)
	D590	UDZS5.1B

SWITCHES

	S501–S508, S511–S515	ASG7013
	S521–S526, S531–S536	ASG7013
	S541–S547	ASG7013

CAPACITORS

	C651	CEAT101M10
	C658	CEAT1R0M50
	C659	CEAT220M50
	C501, C511, C521, C531, C541	CKSRYB102K50
	C596–C599, C656	CKSRYB102K50
	C652–C655, C657	CKSRYB103K50
	C683–C700	CKSRYB221K50

RESISTORS

	R596, R597	RS1/16S2201F
	VR501 (50kΩ-B x2)	DCV1011
	Other Resistors	RS1/16S□□□ J

OTHERS

	CN504 CONNECTOR	52084-0810
	CN503 CONNECTOR	52084-0910
	CN501 4P JUMPER CONNECTOR	52147-0410
	V501 VACUUM FL DISPLAY	DEL1047
	X501 CERAMIC RESONATOR (4MHz)	DSS1131
	FL HOLDER	DNK3956

L PHTB ASSY

SEMICONDUCTORS

	D591, D592	GP1S94

CAPACITORS

	C591	CKSRYB103K50

RESISTORS

	Other Resistors	RS1/16S□□□ J

OTHERS

	J 502 JUMPER WIRE	D20PWY0415E

M CNNB ASSY

SEMICONDUCTORS

	IC701	BA05T

CAPACITORS

	C703	CEAT101M10
	C701	CEAT101M16
	C702, C704	CKSRYB103K50

OTHERS

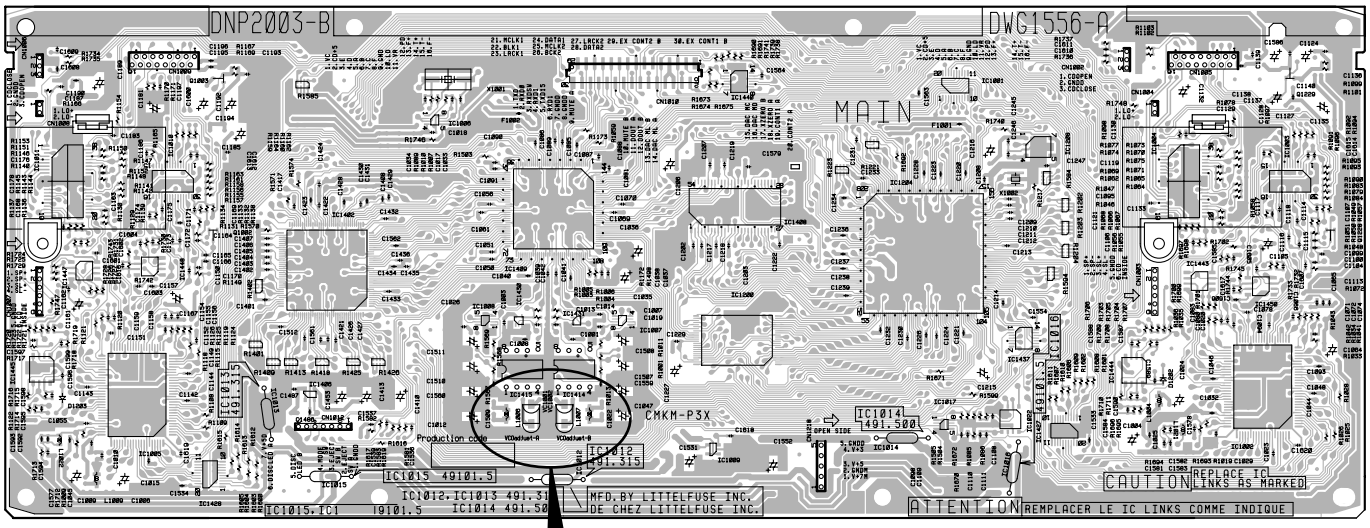
	CN704 CONNECTOR 8P	53095-0810
	CN703 CONNECTOR 9P	53095-0910
	CN702 CONNECTOR 15P	53095-1510
0	I/O JACK	VKN1070
0	SCREW PLATE	VNE1948

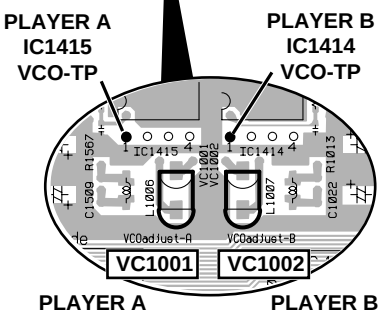
6. ADJUSTMENT

6.1 ADJUSTMENT ITEMS AND LOCATION

■ Adjustment Points (PCB Part)

A MAIN ASSY **SIDE A**



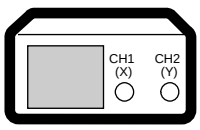


■ Adjustment Items

[Electrical Part]

① VCO Free-running Adjustment

6.2 JIGS AND MEASURING INSTRUMENTS

⊖ Screwdriver (small)	 Dual-trace oscilloscope (10:1 probe)

6.3 NECESSARY ADJUSTMENT POINTS

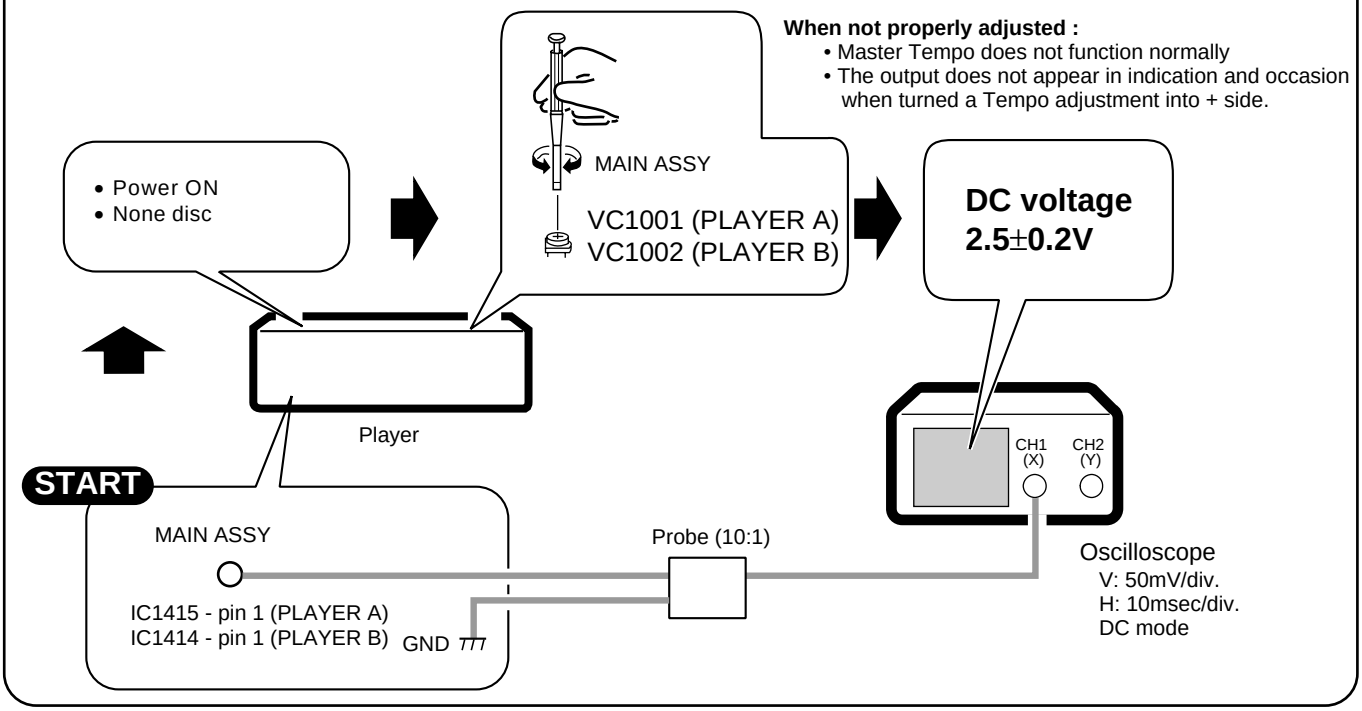
When	Adjustment Points
Exchange MAIN ASSY	① → Page 56
Exchange CD MECHANISM ASSY (DA11T3CNPIO)	——

6.4 ELECTRICAL ADJUSTMENT

① VCO Free-running Adjustment

Objective : To optimize the VCO free-running frequency

When not properly adjusted :
- Master Tempo does not function normally
- The output does not appear in indication and occasion when turned a Tempo adjustment into + side.



7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 SERVICE MODE

■ Outline of the Service Mode

This unit prepares the test mode in the controller and player sections.

① **Confirmation mode of the controller button and display function**
There are following two ways in the mode confirming the controller button and display function.
Mode 1: When connect the Controller section to the Player, and confirm it.
Mode 2: When connect the power supply to Controller section being simple, and confirm it.
Basic operation is the same with both modes, but FL does not light.

② **The mode which confirms the operation with the player being simple (Use the remote control unit.)**
Connect the Remote control unit (RU-V101) to a DATA IN/OUT terminal of the Player and confirms the operation.

③ **State confirmation mode with the system operation**
Confirm the software version of each microcomputer and active state with the display.

■ Confirmation Mode of the Controller Button and Display Function

• Mode 1
Enter this mode when turns the power on while pressing the AUTO button of each player simultaneously.
Mode 1 can confirm the state of each other button with FL other than the operation of mode 2.

• Mode 2
Enter this mode when connects a screw terminal to GND and +8V from the external DC power supply to V+8B by controller section being simple. Further, it is not necessary to press buttons in the power-up.

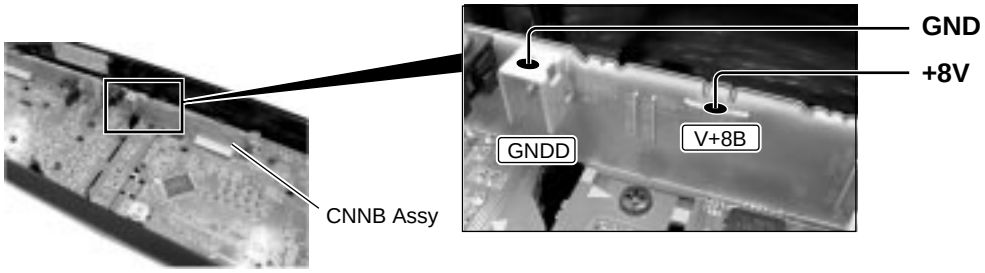
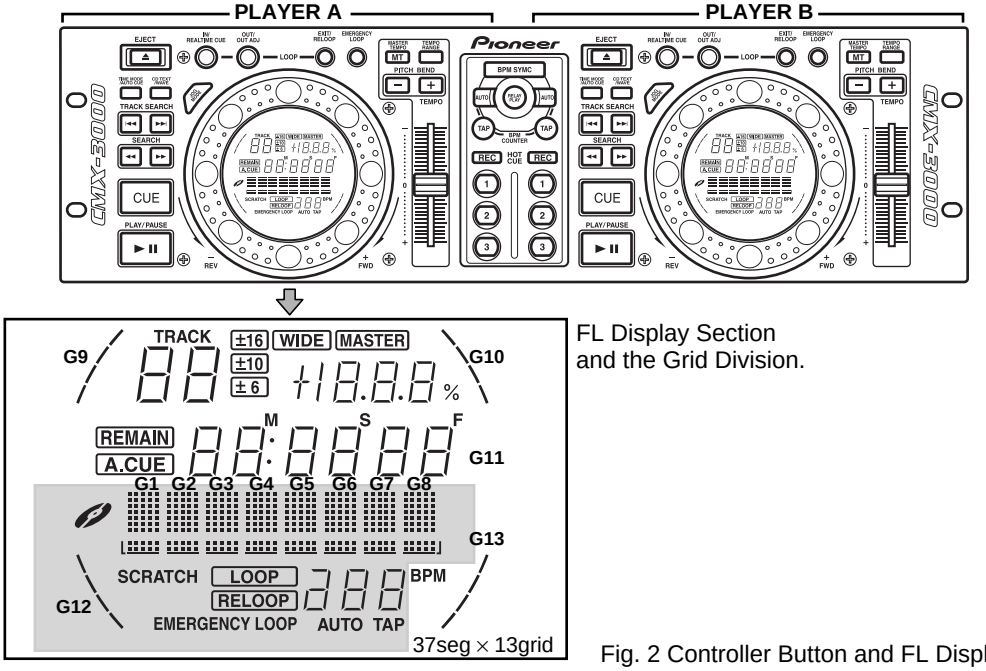


Fig.1 External DC Power Supply Connection Position

Note : Mode 1 and mode 2 are the same operations basically. But a power supply of FL system is not supplied in case of mode 2. Therefore cannot confirm it with FL.
Explain the operation about mode 1 here. (Mode 2 is the same except that FL of mode 1 does not light.)



FL Display Section and the Grid Division.

Fig. 2 Controller Button and FL Display Section

• Confirm the FL display operation
In mode 1, display the demonstration display of fixed pattern and display 1/2 light, all lighting and all lights out repeatedly.
In addition, display the button name in dot matrix of Grid 1 to Grid 8 while a button is pressed.

• Confirm the each button operation
Corresponding two LED lights when pressed the button of each player.
Relation of LED corresponding to each button is the following matrix, and vertical scale of each button and button LED corresponding to horizontal scale light it.
For example, "CUE" button LED of player B and "HOT CUE ①" button LED of player A light it when pressed "EJECT" button of player B.

When "BPM SYNC" and "RELAY PLAY" button were pressed, "CUE" button LED of player B and "HOT CUE (REC)" button LED of player A and "HOT CUE ③" button LED of player B light it.

	PLAY/PAUSE (►/II) Button LED of Each Player	CUE Button LED of Each Player	IN/REALTIME CUE Button LED of Each Player	OUT/OUT ADJ Button LED of Each Player
HOT CUE ③_a Button LED	SERCH (◄◄)	MASTER TEMPO	HOT CUE ①	PLAY/PAUSE (►/II)
HOT CUE ②_a Button LED	SERCH (►►)	TEMPO RANGE	HOT CUE ②	CUE
HOT CUE ①_a Button LED	TRACK SERCH (I◄◄)	EJECT	HOT CUE ③	IN/REALTIME CUE
HOT CUE (REC)_a Button LED	TRACK SERCH (►►I)	BPM SYNC (Player B)	HOT CUE (REC)	OUT/OUT ADJ
HOT CUE ③_b Button LED	TIME MODE / AUTO CUE	RELAY PLAY (Player B)	AUTO	JOG MODE
HOT CUE ②_b Button LED	CD TEXT / WAVE		TAP	EXIT/RELOOP
HOT CUE ①_b Button LED	PITCH BEND (+)			EMERGENCY LOOP
HOT CUE (REC)_b Button LED	PITCH BEND (–)			

In the mode 1, display the button name to correspond in dot matrix in the FL.

Button	FL Display	Button	FL Display
SEARCH (◄◄) Button	SERCH ◄◄	HOT CUE ① Button	HOTCUE 1
SEARCH (►►) Button	SERCH ►►	HOT CUE ② Button	HOTCUE 2
TRACK SEARCH (I◄◄) Button	TRACK I◄◄	HOT CUE ③ Button	HOTCUE 3
TRACK SEARCH (►►I) Button	TRACK ►►I	HOT CUE (REC) Button	HOT REC
TIME MODE / AUTO CUE Button	TIME/CUE	AUTO Button	AUTO
CD TEXT / WAVE Button	TEXTWAVE	TAP Button	TAP
PITCH BEND (+) Button	PITCH +	PLAY/PAUSE (►/II) Button	PLAY
PITCH BEND (–) Button	PITCH –	CUE Button	CUE
MASTER TEMPO Button	M.T ∗∗∗ (Note ∗1)	IN/REALTIME CUE Button	LOOP IN
TEMPO RANGE Button	TEMPO ∗∗∗ (Note ∗1)	OUT/OUT ADJ Button	LOOP OUT
EJECT (⏏) Button	EJECT	JOG MODE Button	JOG MODE
BPM SYNC Button	BPM SYNC ∗2	EXIT/RELOOP Button	RELOOP
RELAY PLAY Button	RELAY PL ∗2	EMERGENCY LOOP Button	EM. LOOP

Note ∗1 : Reading value of the TEMPO slider (+10 to 0 to –10) displays in ∗ ∗ ∗.
∗2 : Display in FL of the player B side.

• Confirm the JOG operation
Button LED corresponding to each JOG blinks when turned JOG.
When JOG of player A side moves: RELAY PLAY button LED light or turn off the light in the state of the JOG address that read in.
When JOG of player B side moves: BPM SYNC button LED light or turn off the light in the state of the JOG address that read in.

• Confirm the each button LED
In this unit, all button LED light fixed time at the power-up.
In addition, it can confirm the lighting state by performing the "Confirm the each button operation", "Confirm the JOG operation" and "Confirm the TEMPO slider".

• Confirm the TEMPO slider
In the position which read-in from the TEMPO slider, MT button LED lights at + side, and MT button LED turns off the light at – side.

However, there is a case that lights or turns off the light for unevenness of parts of TEMPO slider at the center tap periphery.
In addition, when TEMPO button and MT button were pressed in mode 1, match with button name in dot matrix in the FL, and display reading value of TEMPO slider by a value of +10 to 0 to –10.

■ Confirmation Mode of Operation with the Player Being Simple

Connect the remote control unit (RU-V101) to DATA IN/OUT terminal of the Rear panel of the player section, and confirm the operation.
When use the remote control unit, remove a connection cable with the control section before power-up, then connect the remote control unit.

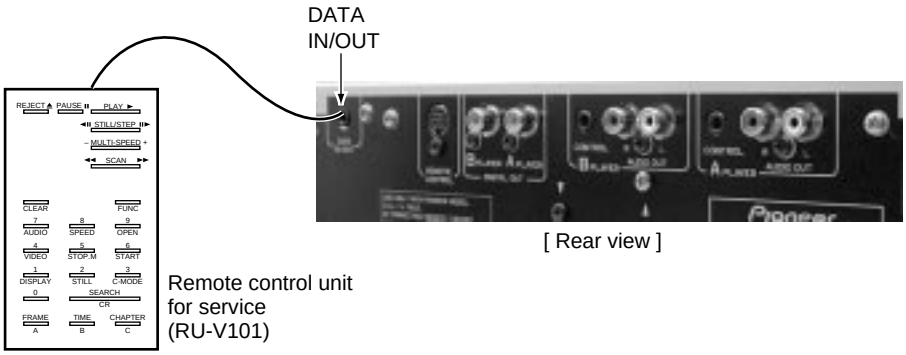
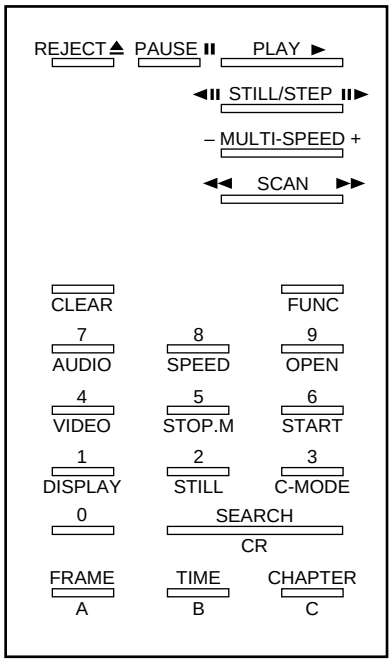


Fig. 3 Connection of the Remote Control Unit for Service

• Function of the remote control unit (RU-V101) for service



	Button Corresponding to RU-V101	Digital SW OFF in CDJ Mode	Digital SW ON in Digital Mode
Player Select	STOP. M (FUNC + 5)	○	○
A Time Mode Set	TIME		○
Track Mode Set	CHAPTER	○	○
Frame Mode Set	FRAME		○
Play	PLAY ►	○	○
(Reject)	REJECT ▲		○
(Pause)	PAUSE II	○	○
(Search)	SEARCH	Track Search	○
(Scan Forward)	SCAN ►►		○
(Scan Reverse)	SCAN ◄◄		○
(1 Track Search Forward)	STILL / STEP II►	○	○
(1 Track Search Reverse)	STILL / STEP ◄II	○	○
(Eject)	OPEN (FUNC + 9)	○	○
(Speed)	SPEED (FUNC + 8)		○
(X Speed)	A (FUNC + FRAME)		○
(Test / Normal Mode Change)	C-MODE (FUNC + 3)		○
(Servo All OFF)	0 + TIME		○
(Focus ON)	1 + TIME		○
(Spindle Kick, Tracking ON / OFF)	2 + TIME		○
(Tracking OFF)	3 + TIME		○
(Slide FWD)	4 + TIME		○
(Slide REV)	5 + TIME		○
(Search TR No. 2)	6 + TIME		○

• Specification method of the player issuing the command
One remote control unit is prepared for two players in this unit.
It is necessary to specify the player beforehand when issues the command to each player.
Specification method of player A (left side from the front): Press buttons of "1", "STOP.M" ("FUNC" and "5") in order.
Specification method of player B (right side from the front): Press buttons of "2", "STOP.M" ("FUNC" and "5") in order.

Command is published by the specified player till the next Player Select command is issued after this command issue.

• Specification method of addressing modes in the search
There are three ways of search methods of time search, track search and frame search in this unit.
It is necessary to specify each mode when performs each search.

• Time search (A Time mode set)
Set absolute time (minute, second, frame) in the address mode.
[Examples] When search for 2 minutes 34 seconds 56 frame:
Press buttons of "TIME", "0", "2", "3", "4", "5", "6" and "SEARCH" in order.

• Track search (Track mode set)
Set track number in the address mode.
[Examples] When search for track 5:
Press buttons of "CHAPTER", "5" and "SEARCH" in order.

• Frame search (Frame mode set)
Set frame in the address mode.
[Examples] When search for 1200 frame:
Press buttons of "1", "2", "0", "0" and "SEARCH" in order.

• Player operation command
(Play) : Playback

(Reject) : Stop

(Pause) : Pause. Also stop the scan operation during scan, and become pause.
Become the sound output pause in the CDJ mode.

(Scan Forward) : Perform the scan opearation in the forward direction.
Press the PAUSE button when completes the scan operation.

(Scan Reverse) : Perform the scan opearation in the reverse direction.
Press the PAUSE button when completes the scan operation.

(1 Track Search Forward) : Perform the track search in the forward direction.

(1 Track Search Reverse) : Perform the track search in the reverse direction.

(Eject) : Perform the disc eject either Playback state or Stop state.

(Speed) : In the CDJ mode, set the playback speed (tempo) that specified with the argument.
An argument is three columns of figure and specify 0: – (minus) or 1: + (plus) with 100-place.
And specify (from 0 to 16) a tempo (%) by two places of remainders.
Example: It becomes the +1% setting by pressing buttons of "1", "0", "1", "SPEED" ("FUNC" and "8") in order.
It becomes the –10% setting by pressing buttons of "0", "1", "0", "SPEED" ("FUNC" and "8") in order.
It becomes the +16% setting by pressing buttons of "1", "1", "6", "SPEED" ("FUNC" and "8") in order.

• Test operation command
As for the following command, an operation becomes possible in the digital mode (digital mode switch of front panel is ON).
Because there is a case to damage the player when test operation command mistakes usage, be careful.

(X Speed) : In the digital mode, switch the rotation speed of the player to normal speed and double speed .
Further, sound cannot output in the double speed.
Example:
It becomes the normal speed playback setting by pressing buttons of "1" and "A" ("FUNC" and "FRAME") in order.
It becomes the double speed playback setting by pressing buttons of "2" and "A" ("FUNC" and "FRAME") in order.
∗ This command issues a command by stopped state in order to issue a command to servo DSP directly.

(Test/Normal Mode Change) : Switch the Test mode/Normal mode by "C-MODE" ("FUNC" and "3") buttons.
Can use only commands of 6TM from 0TM in the test mode.

(Servo All OFF) : During servo ON, turn all servo OFF when pressing "0" and "TIME" buttons in order.

(Focus ON) : During CD STOP, turn the LD ON and perform the auto focus when pressing "1" and "TIME" buttons in order.

(Spindle Kick and Tracking ON/OFF) : During tracking servo OFF, perform the spindle kick and turn the automatic adjustment processing and tracking servo ON when pressing "2" and "TIME" buttons in order.
Also during tracking servo ON, turn the tracking servo OFF when pressing "2" and "TIME" buttons in order.

(Tracking OFF) : During tracking servo ON, turn the tracking servo OFF when pressing "3" and "TIME" buttons in order.

(Slide FWD) : During tracking servo ON, Turn the tracking servo OFF and move the slider in the FWD direction when pressing "4" and "TIME" buttons in order.

(Slide REV) : Turn the tracking servo OFF and move the slider in the REV direction when pressing "5" and "TIME" buttons in order during tracking servo ON.

(SEARCH TR No. 2) : During CD STOP, perform the following operation when pressing "6" and "TIME" buttons in order.
LD ON - Auto focus - Spindle kick - automatic adjustment processing - Second tune search - Tracking servo ON
When performed Tracking OFF, there is the case that cannot rise up in this command.
In that case please repeat once again after power OFF and ON.

∗ : When rise up by a step with the test mode, input a command by pressing buttons of "0", "TIME", "1", "TIME", "2" and "TIME" in order.

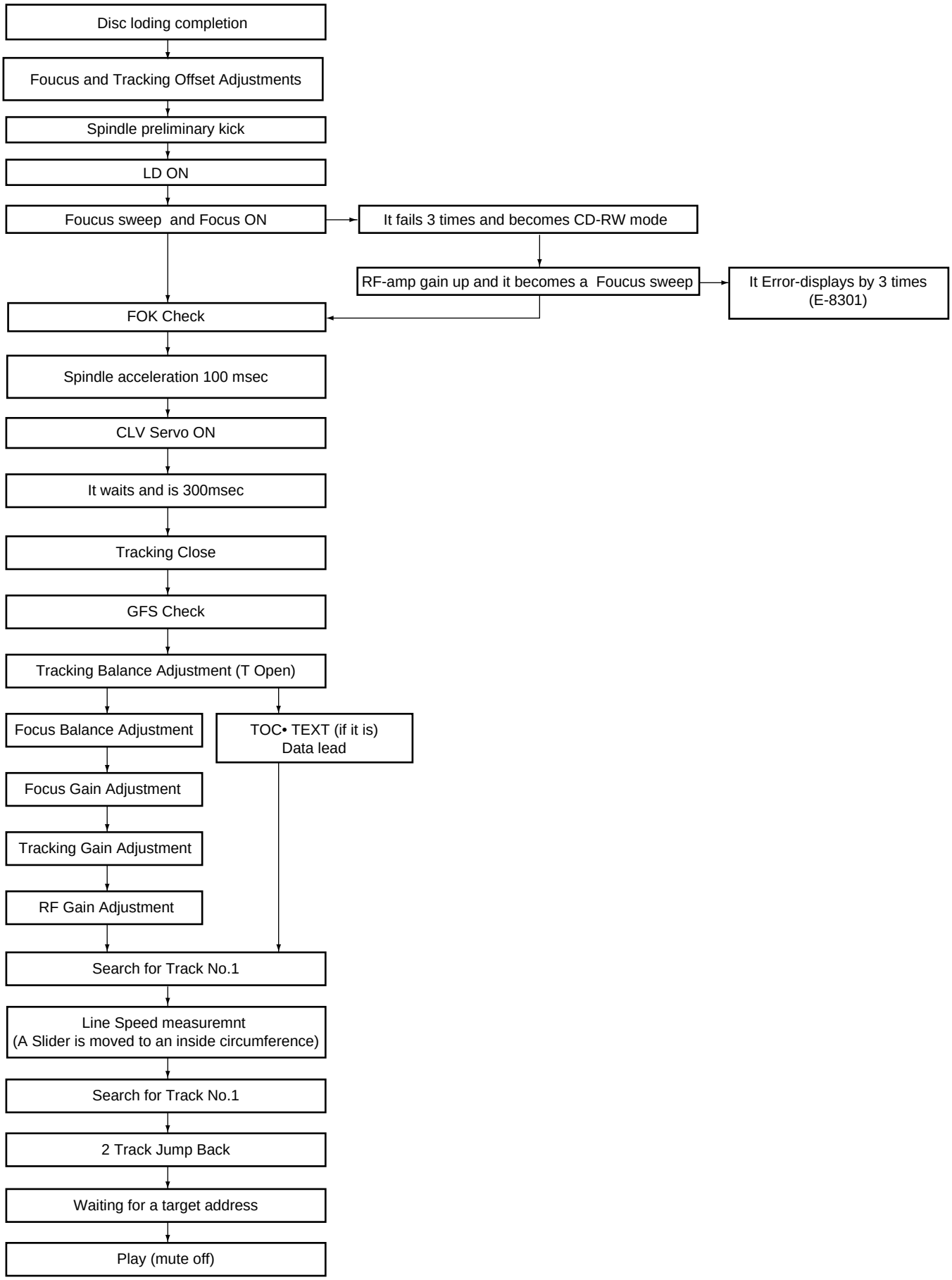
■ State Confimation Mode in the System Operation

The mode which confirms confirmation and operating state of software version of each microcomputer by display.

• Confirmation method of the microcomputer software version of the controller section
Load two microcomputers on the controller section.
As for the symptom of a version of each microcomputer, dot matrix is displayed for about 2 seconds while pressing each PITCH BEND (+) button by turning the power on.

• Confirmation method of the player section
Player section processes both players with one microcomputer.
As for the method to confirm a microcomputer version, a version is displayed by long push of CD TEXT/WAVE button and OUT/OUT ADJ button in FL.

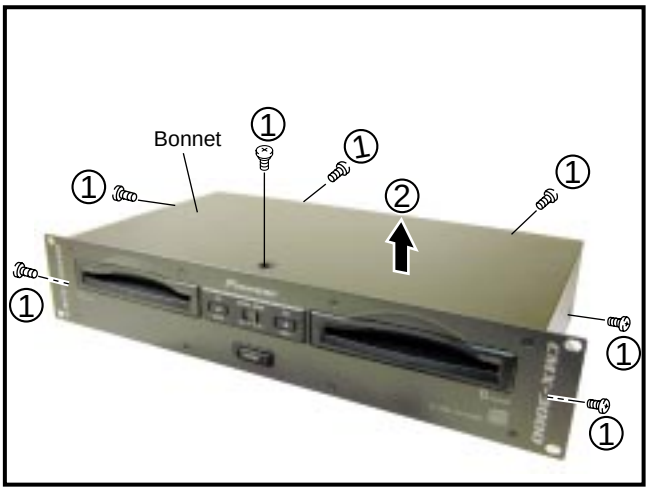
7.1.2 STARTING SEQUENCE



7.1.3 DISASSEMBLY

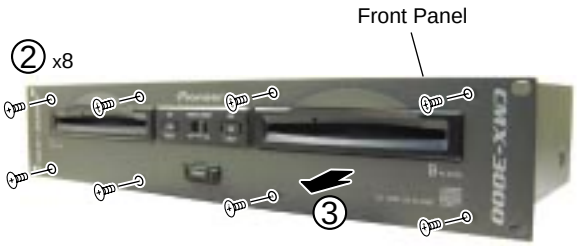
(1) CMX-3000

■ Bonnet



■ Front panel Section

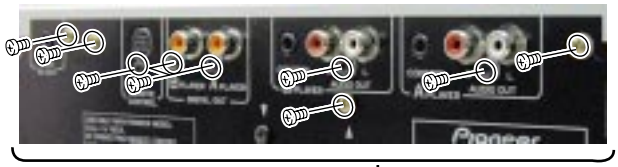
① Remove the Bonnet.

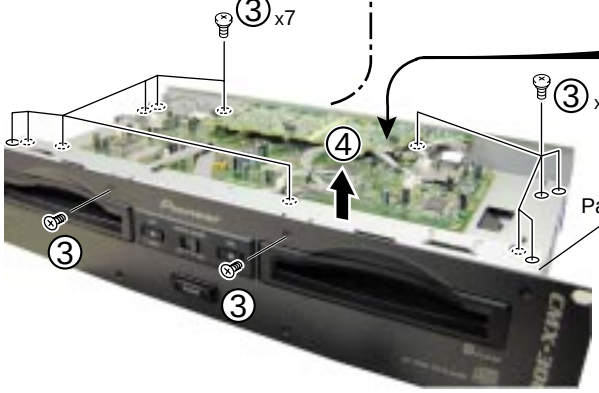


■ MAIN Assy - Player Section

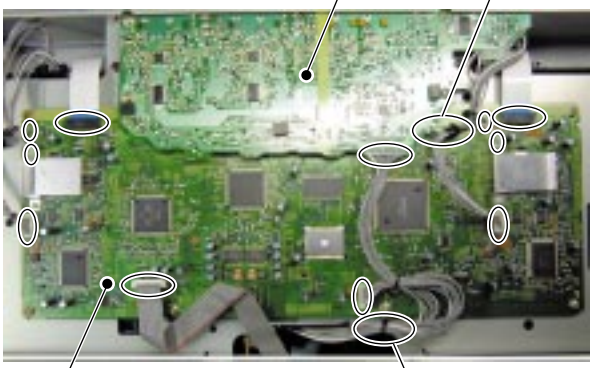
① Remove the Bonnet.

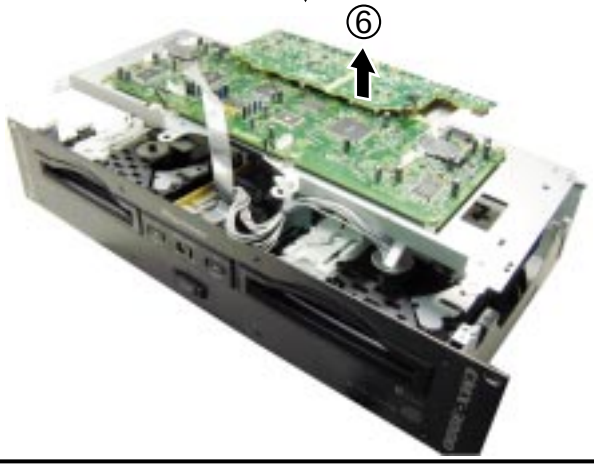
Rear View





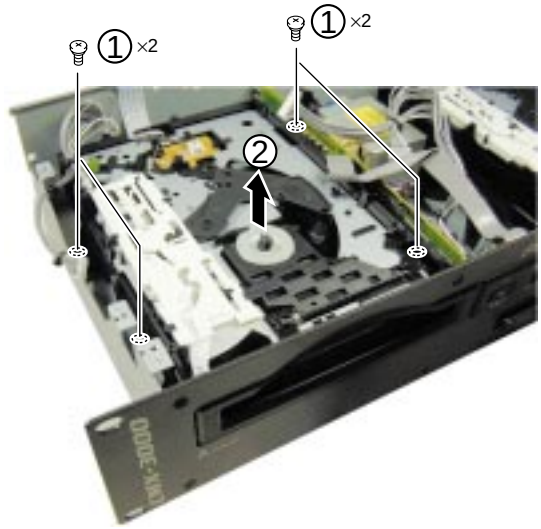
⑤ Remove the connector.



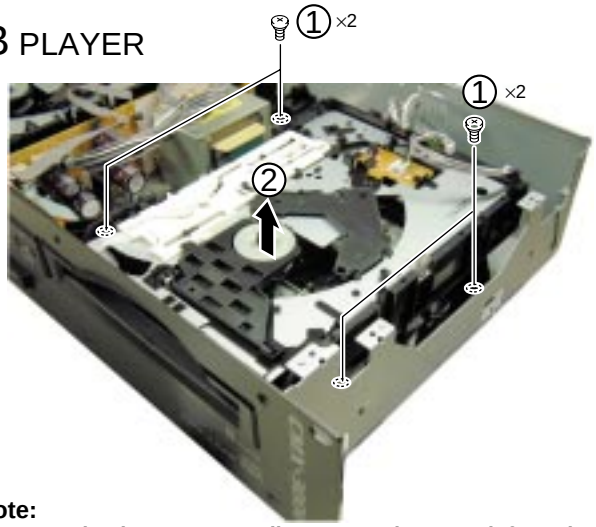


■ SLOT-IN MECHANISM Assy

A PLAYER

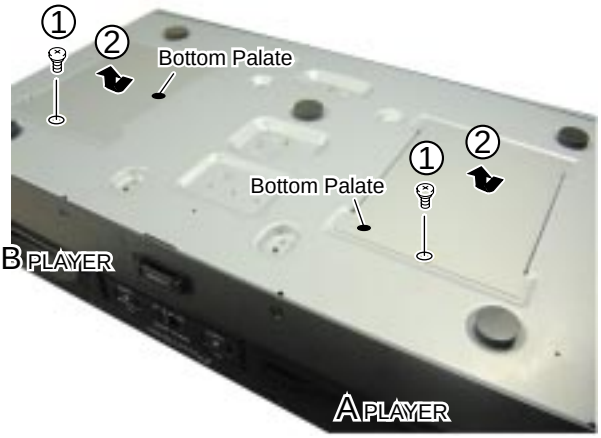


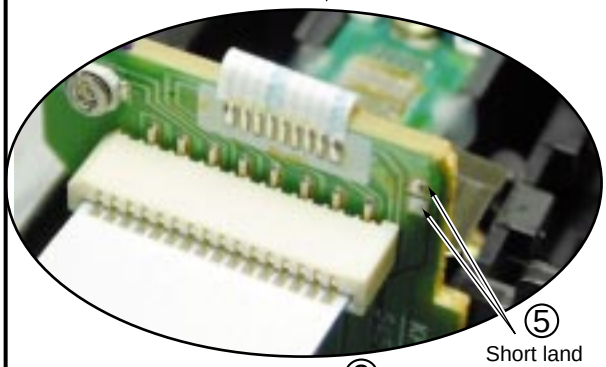
B PLAYER

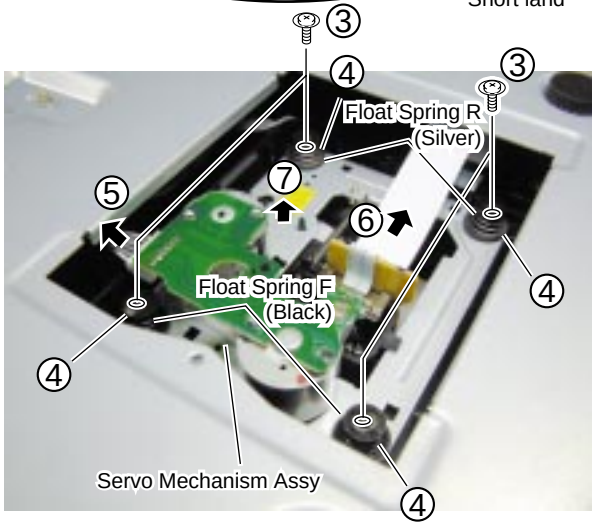


Note:
Servo Mechanism Assy can diagnose and remove it from the backside.
(Inverts the product, and not performing the operation check.)

■ SERVO MECHANISM Assy







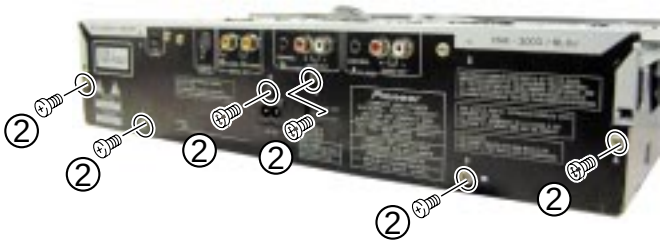
[Caution in the Servo Mechanism Assy replacement]

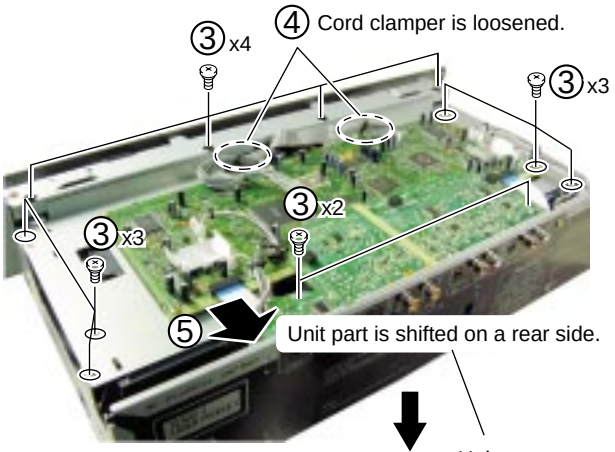
- **When remove the Servo Mechanism Assy, short-circuit a LD Short land ⑤ before disconnecting a flexible cable from the connector.**
  When install the Servo Mechanism Assy, release the short-circuit of LD Short land ⑤ after connecting the flexible cable to the connector. (For LD fracture prevention)

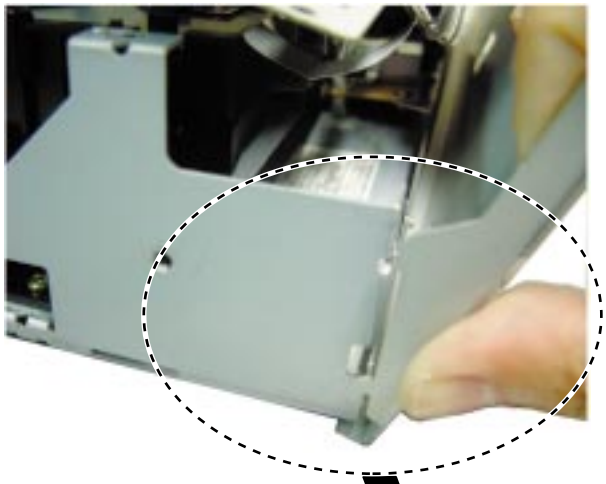
- **Installing the Froat Spring F and Froat Spring R to the correct position.**
  Front side : Froat Spring F (Black) x2
  Rear side : Froat Spring R (Silver) x2

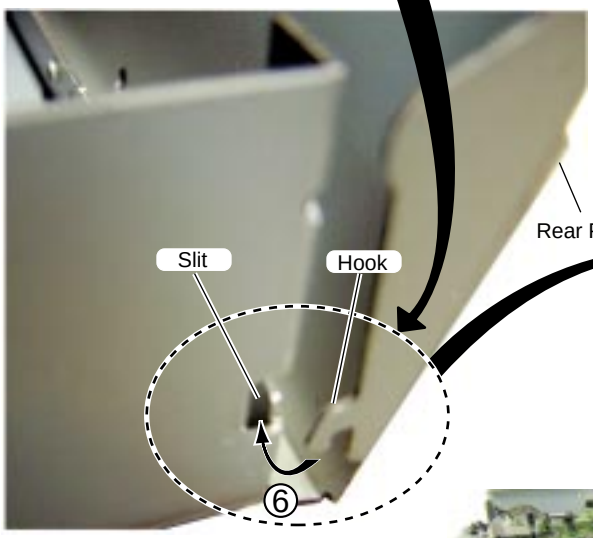
■ The Operation check method of a mechanism unit

① Remove the Bonnet

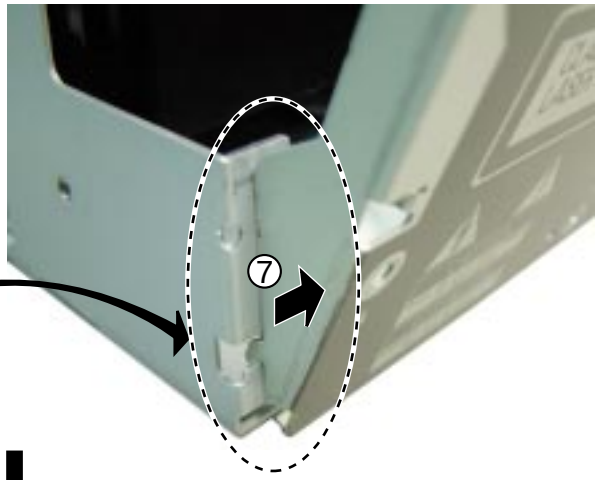








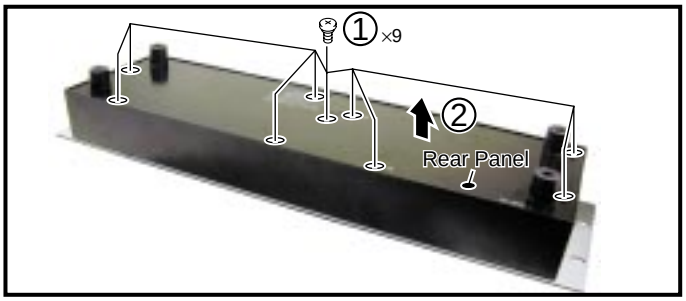
The Hook of a rear panel is put in to a slit.



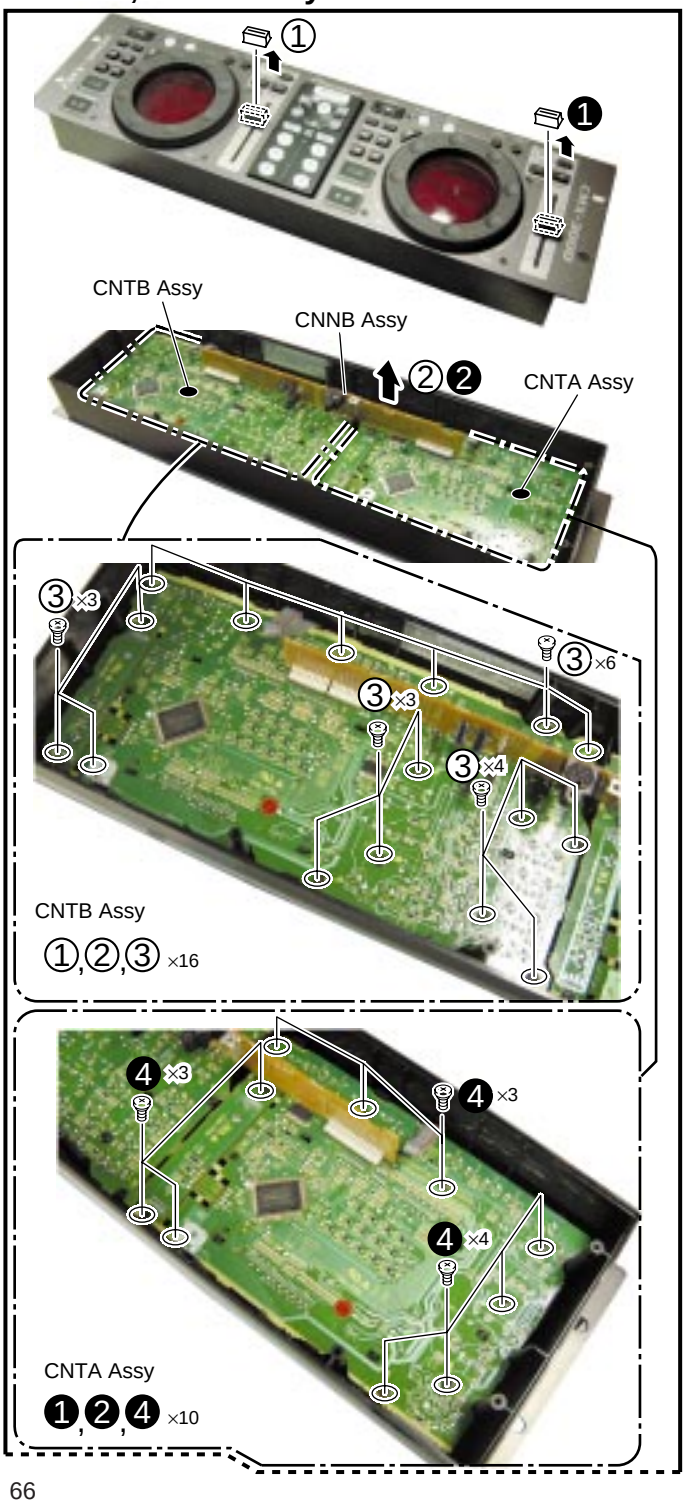
⑧ Diagnosis of a mechanism unit.

(2) REMOTE CONTROLLER (CU-V163)

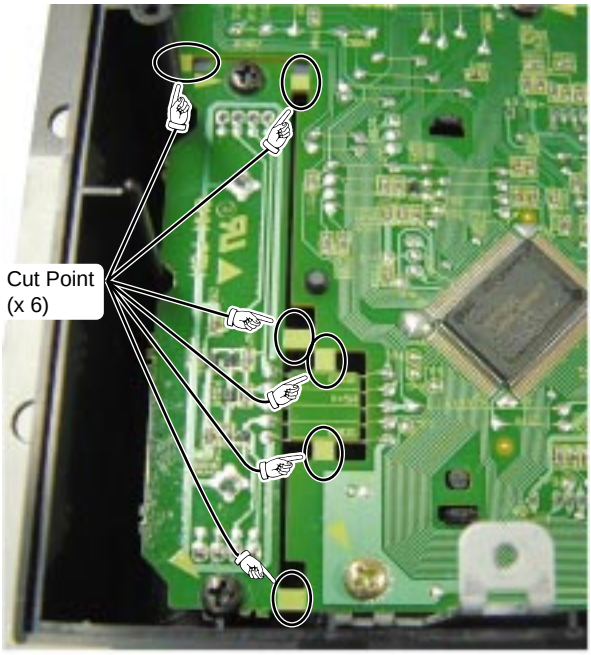
■ Rear Panel



■ CNTA, CNTB Assy



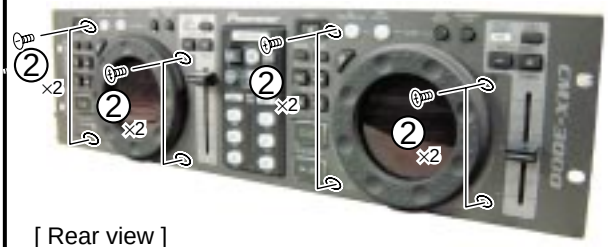
Note :
When cuts PC Board with a nipper and replaced slide VR, positioning becomes invalid. Please aline it by visual inspection when installs it. (Refer to the following diagram.)



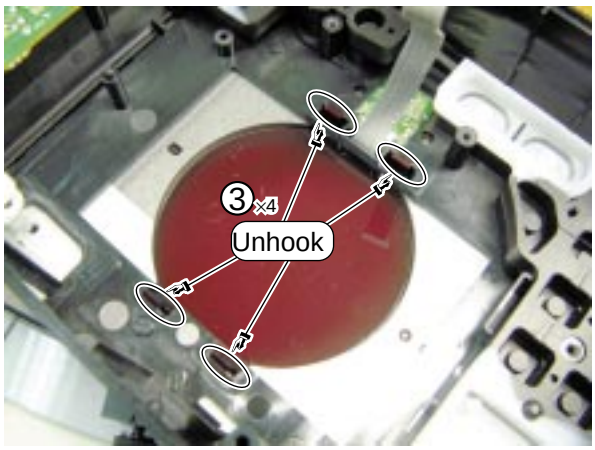
This illustration is CNTB Assy.

■ JOG Dial

① Remove the CNTA, CNTB and CNNB Assy

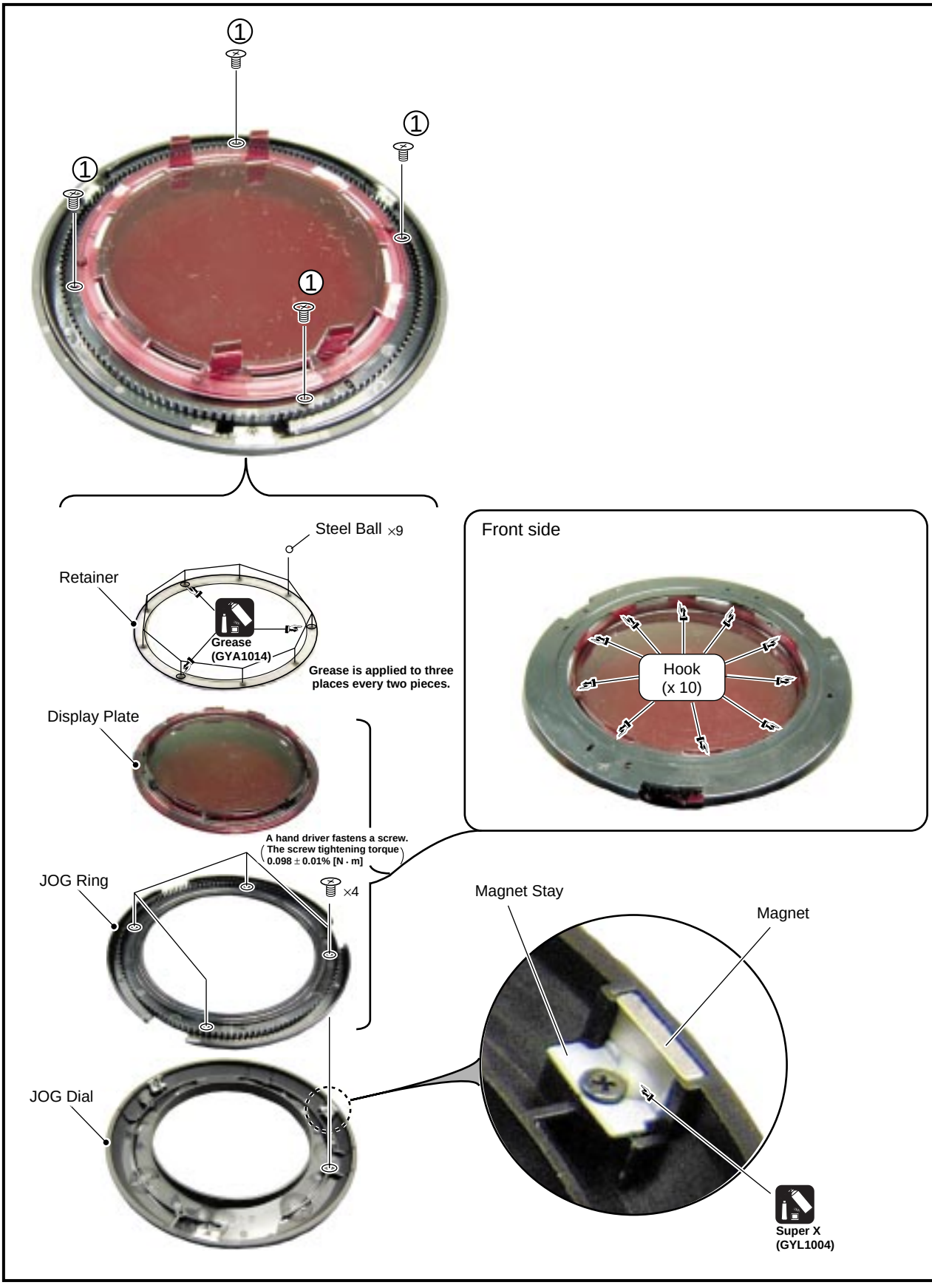


[Rear view]



④ Remove the Front Panel Assy

■ JOG Dial Section



7.2 PARTS

7.2.1 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

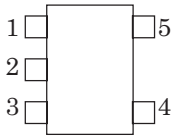
●List of IC

NJM2870F18, NJM2870F25, NJM2360M, PST994D, TC74VHC04FT, XC2S30-5TQ144C, TA2153FN, PD5764A, HD6417709AF100B

■ NJM2870F18 (MAIN ASSY : IC1406)

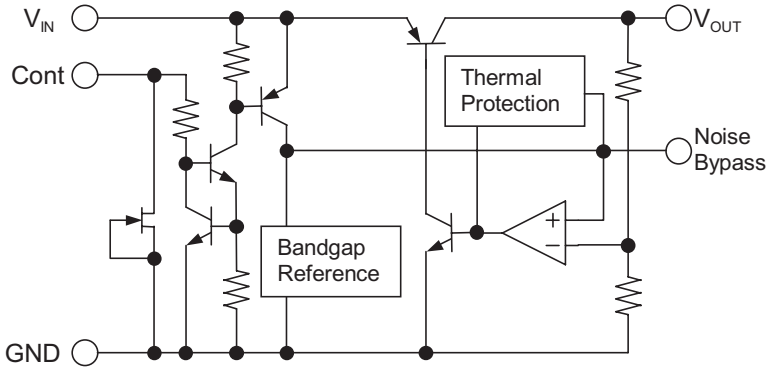
• Regulator IC

● Pin Arrangement



PIN FUNCTION
1. CONTROL (Active High)
2. GND
3. NOISE BYPASS
4. V_{OUT}
5. V_{IN}

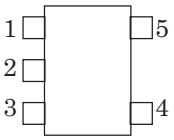
● Block Diagram



■ NJM2870F25 (MAIN ASSY : IC1009)

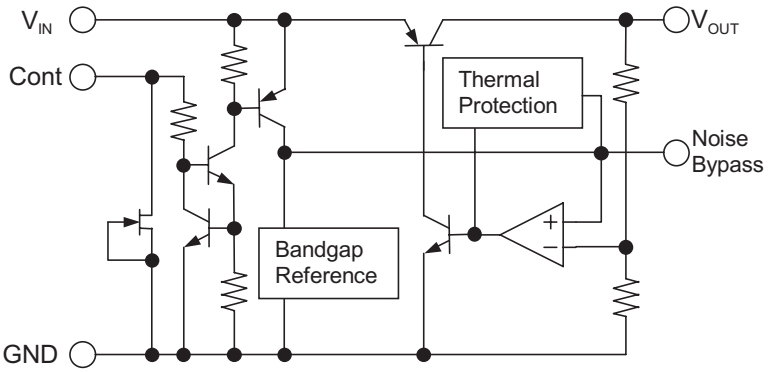
• Regulator IC

● Pin Arrangement



PIN FUNCTION
1. CONTROL (Active High)
2. GND
3. NOISE BYPASS
4. V_{OUT}
5. V_{IN}

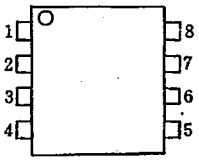
● Block Diagram



■ NJM2360M (JACB ASSY : IC211)

• DC-DC Convertor

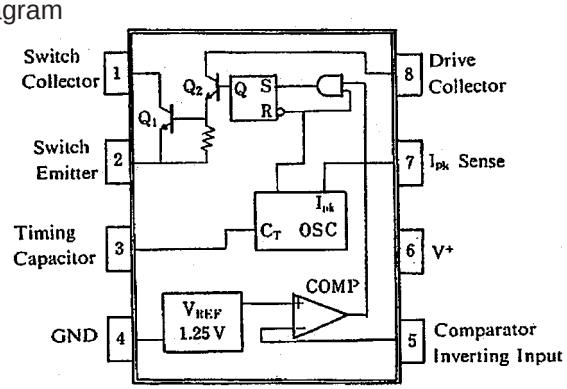
● Pin Arrangement



PIN FUNCTION

1. C_S
2. E_S
3. C_T
4. GND
5. INV_{IN}
6. V^+
7. S_I
8. C_D

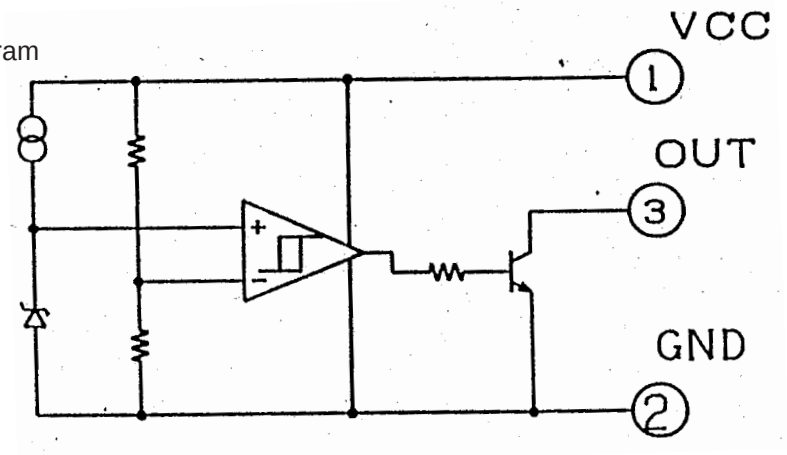
● Block Diagram



■ PST994D (CNTB ASSY : IC502)

• Reset IC

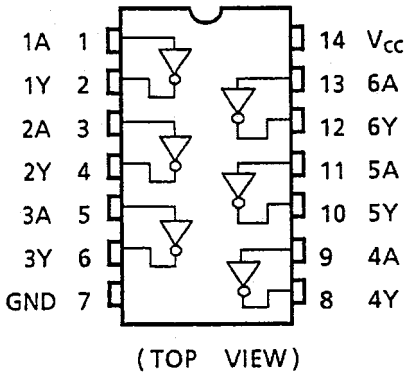
● Block Diagram



■ TC74VHC04FT (MAIN ASSY : IC1437)

• Logic IC

● Pin Arrangement



(TOP VIEW)

XC2S30-5TQ144C (MAIN ASSY : IC1409)

• PLD IC

● Pin Name

Pin No.	Port Name	Pin Name
1	Vcco	Vcco
2	TCK	TCK
3	EX_CONT2_A	I/O
4	DAC1_MCLK	I/O
5	DAC1_BCK	I/O,Vref
6	DAC1_LRCK	I/O
7	DAC1_DATA	I/O
8	GND	GND
9	Vccint	Vccint
10	DAC2_MCLK	I/O
11	DAC2_BCK	I/O
12	DAC2_LRCK	I/O,Vref
13	DAC2_DATA	I/O
14	Vccint	Vccint
15	CKIO	GCK3
16	VCCO	Vcco
17	GND	GND
18	PLLCLK	GCK2
19	GND	I/O
20	EX_CONT1B	I/O
21	EX_CONT2B	I/O,Vref
22	SBOK2	I/O
23	SUBQ2	I/O
24	Vccint	Vccint
25	GND	GND
26	SBSY2	I/O
27		I/O
28	SFSY2	I/O,Vref
29	LRCK2	I/O
30	BCK2	I/O(WRITE)
31	ADATA2	I/O(CS)
32	TDI	TDI
33	GND	GND
34	TDO	TDO
35	Vcco	Vcco
36	Vcco	Vcco
37	CCLK	CCLK
38		I/O(DOUT,BUSY)
39	DIN	I/O(DIN,D0)
40	BCLKB	I/O
41	DBCLKB	I/O,Vref
42		I/O
43	SDI0B	I/O
44	D0	I/O(D1)
45	GND	GND
46	D1	I/O(D2)
47	D2	I/O
48	D3	I/O,Vref
49	D4	I/O(D3)
50	D5	I/O
51	D6	I/O,IRDY
52	GND	GND
53	VCCO	VCCO
54	D7	I/O,Trdy
55	Vccint	Vccint
56	A1	I/O
57	A2	I/O(D4)
58	MREQB	I/O,Vref
59	XRD	I/O
60	XWE	I/O(D5)
61	GND	GND
62	MREQA	I/O(D6)
63	BCLKA	I/O
64		I/O
65	DSP1BCK	I/O,Vref
66	DBCLKA	I/O
67	DSP1LRCK	I/O(D7)
68	INIT	I/O(INIT)
69	XPROGRAM	PROGRAM
70	Vcco	Vcco
71	Vcco	Vcco
72	DONE	DONE
73	GND	GND
74	SDI0A	I/O
75	SDI1A	I/O
76	SDI2A	I/O
77	SDI2B	I/O,Vref
78	DSP2DATA	I/O
79	DSP1DATA	I/O
80	SDI1B	I/O
81	GND	GND
82	Vccint	Vccint
83	DISC_LED_A	I/O
84	DISC_LED_B	I/O
85	G2	I/O,Vref
86	A2	I/O
87	GND	I/O
88	ACLK2	GCK0
89	GND	GND
90	Vcco	Vcco
91	ACLK1	GCK1
92	Vccint	Vccint
93	G1	I/O
94	A1	I/O,Vref
95		I/O
96	XDACK1	I/O
97	Vccint	Vccint
98	GND	GND
99	XDACK0	I/O
100	XRST	I/O
101	NC	I/O
102	XCS5	I/O,Vref
103	XCS2	I/O
104	STATUS	STATUS
105	PWDN	PWDN
106	M2	M2
107	VCCO	Vcco
108	VCCO	Vcco
109	M0	M0
110	GND	GND
111	M1	M1
112	A25	I/O
113	A24	I/O
114	A23	I/O
115	A3	I/O,Vref
116	NC	I/O
117	D8	I/O
118	D9	I/O
119	GND	GND
120	D10	I/O
121	D11	I/O
122	D12	I/O,Vref
123	D13	I/O
124	D14	I/O
125	Vccint	Vccint
126	D15	I/O,TRDY
127	Vcco	Vcco
128	GND	GND
129	RD/XWR	I/O,IRDY
130	XDREQ1	I/O
131	XDREQ0	I/O
132	SUBQ1	I/O,Vref
133	SBSY1	I/O
134		I/O
135	GND	GND
136	SBOK1	I/O
137	SFSY1	I/O
138	ADATA1	I/O
139	LRCK1	I/O,Vref
140	BCK1	I/O
141	EX_CONT1_A	I/O
142	TMS	TMS
143	GND	GND
144	VCCO	VCCO

● Pin Function (1/2)

PLL

Pin No.	Pin Name	I/O	Description	Connection Point
18	PLLCK	I	16. 9344MHz Standard Frequency Input	Standard Frequency area
91	ACLK1	I	VCO input for CD1	VCO area
93	G1	O	Phase comparison machine output for CD1	VCO area
94	A1	O	Phase comparison machine output for CD1	VCO area
88	ACLK2	I	VCO iinput for CD2	VCO area
85	G2	O	PLL output for CD2	VCO area
86	A2	O	PLL output for CD2	VCO area

DSP I/F

Pin No.	Pin Name	I/O	Description	Connection Point
62	MREQA	I	Ach REQ signal CD1	DSP Ach
63	BCLKA	O	Bit clock output terminal, clock for audio data	DSP Ach
66	DBCLKA	O	Word clock output terminal	DSP Ach
74	SDI0A	O	Serial audio data output terminal 0	DSP Ach
75	SDI1A	O	Serial audio data output terminal 1	DSP Ach
76	DSI2A	O	Data lead	DSP Ach
58	MREQB	I	Bch REQ signal CD2	DSP Ach
40	BCLKB	O	bit clock output terminal, clock for audio data	DSP Ach
41	DBCLKB	O	Word clock output terminal	DSP Ach
43	SDI0B	O	Serial audio data output terminal 0	DSP Ach
80	SDI1B	O	Serial audio data output terminal 1	DSP Ach
77	DSI2B	O	Data lead	DSP Ach

AUDIO INPUT I/F

Pin No.	Pin Name	I/O	Description	Connection Point
140	BCK1	I	bit clock for audio input from CD1	D Servo IC1
139	LRCK1	I	LR clock for audio input from CD1	D Servo IC1
138	ADATA1	I	audio data from CD1	D Servo IC1
133	S BSY1	I	sub code sync. from CD1	D Servo IC1
137	S FSY1	I	frame sync. from CD1	D Servo IC1
132	S UBQ1	I	sub code Q data from CD1	D Servo IC1
136	S BOK1	I	sub code Q data CRCC judging result input terminal from CD1	D Servo IC1
30	BCK2	I	bit clock for audio input from CD2	D Servo IC2
29	LRCK2	I	R clock for audio input from CD2	D Servo IC2
31	ADATA2	I	audio data from CD2	D Servo IC2
26	S BSY2	I	sub code sync. from CD2	D Servo IC2
28	S FSY2	I	frame sync. from CD2	D Servo IC2
23	S UBQ2	I	sub code Q data from CD2	D Servo IC2
22	S BOK2	I	sub code Q data CRCC judging result input terminal from CD2	D Servo IC2

AUDIO DATA CHANGE

Pin No.	Pin Name	I/O	Description	Connection Point
65	DSP1BCK	I	audio data is changed	DSP
67	DSP1LRCK	I	audio data is changed	DSP
79	DSP1DATA	I	audio data is changed	DSP
78	DSP2DATA	I	audio data is changed	DSP

DAC I/F

Pin No.	Pin Name	I/O	Description	Connection Point
4	DAC1_MCLK	O	clock for DAC1	DAC1
5	DAC1_BCK	O	bit clock for DAC1	DAC1
6	DAC1_LRCK	O	LR clock for DAC1	DAC1
7	DAC1_DATA	O	data for DAC1	DAC1
10	DAC2_MCLK	O	data for DAC2	DAC2
11	DAC2_BCK	O	bit clock for DAC2	DAC2
12	DAC2_LRCK	O	LR clock for DAC2	DAC2
13	DAC2_DATA	O	data for DAC2	DAC2

● Pin Function (2/2)

CPU I/F

Pin No.	Pin Name	I/O	Description	Connection Point
102	XCS5	I	CH input for address decoding	SH3
103	XCS2	I	CH input for address decoding	SH3
112	A25	I	CH input for address decoding	SH3
113	A24	I	CH input for address decoding	SH3
114	A23	I	CH input for address decoding	SH3
115	A3	I	address input terminal for CPU	SH3
57	A2	I	address input terminal for CPU	SH3
56	A1	I	address input terminal for CPU	SH3
126	D15	I/O	address input terminal for CPU	SH3
124	D14	I/O	address input terminal for CPU	SH3
123	D13	I/O	address input terminal for CPU	SH3
122	D12	I/O	address input terminal for CPU	SH3
121	D11	I/O	address input terminal for CPU	SH3
120	D10	I/O	address input terminal for CPU	SH3
118	D9	I/O	address input terminal for CPU	SH3
117	D8	I/O	address input terminal for CPU	SH3
54	D7	I/O	address input terminal for CPU	SH3
51	D6	I/O	address input terminal for CPU	SH3
50	D5	I/O	address input terminal for CPU	SH3
49	D4	I/O	address input terminal for CPU	SH3
48	D3	I/O	address input terminal for CPU	SH3
47	D2	I/O	address input terminal for CPU	SH3
46	D1	I/O	address input terminal for CPU	SH3
44	D0	I/O	address input terminal for CPU	SH3
130	XDREQ1	O	data request	SH3
131	XDREQ0	O	data request	SH3
96	XDACK1	I	data akunoridge	SH3
99	XDACK0	I	data akunoridge	SH3
60	XWE	I	write enable signal	SH3
59	XRD	I	read strobe signal	SH3
129	RD/XWR	I	read write signal	SH3
15	CKIO	I	system clock	SH3
100	XRST	I	system reset	SH3

CPU I/O EXTENSION

Pin No.	Pin Name	I/O	Description	Connection Point
141	EX_CONT1_A	I/O		
3	EX_CONT2_A	I		
20	EX_CONT1B	I/O		
21	EX_CONT2B	I		
83	DISC_LED_A	O		
84	DISC_LED_B	O		

CONFIGURATION

Pin No.	Pin Name	I/O	Description
109	M0	I	
111	M1	I	
106	M2	I	
69	XPROGRAM	O	
39	DIN	I	
68	XINIT	O	
37	CCLK	I/O	
72	DONE	O	

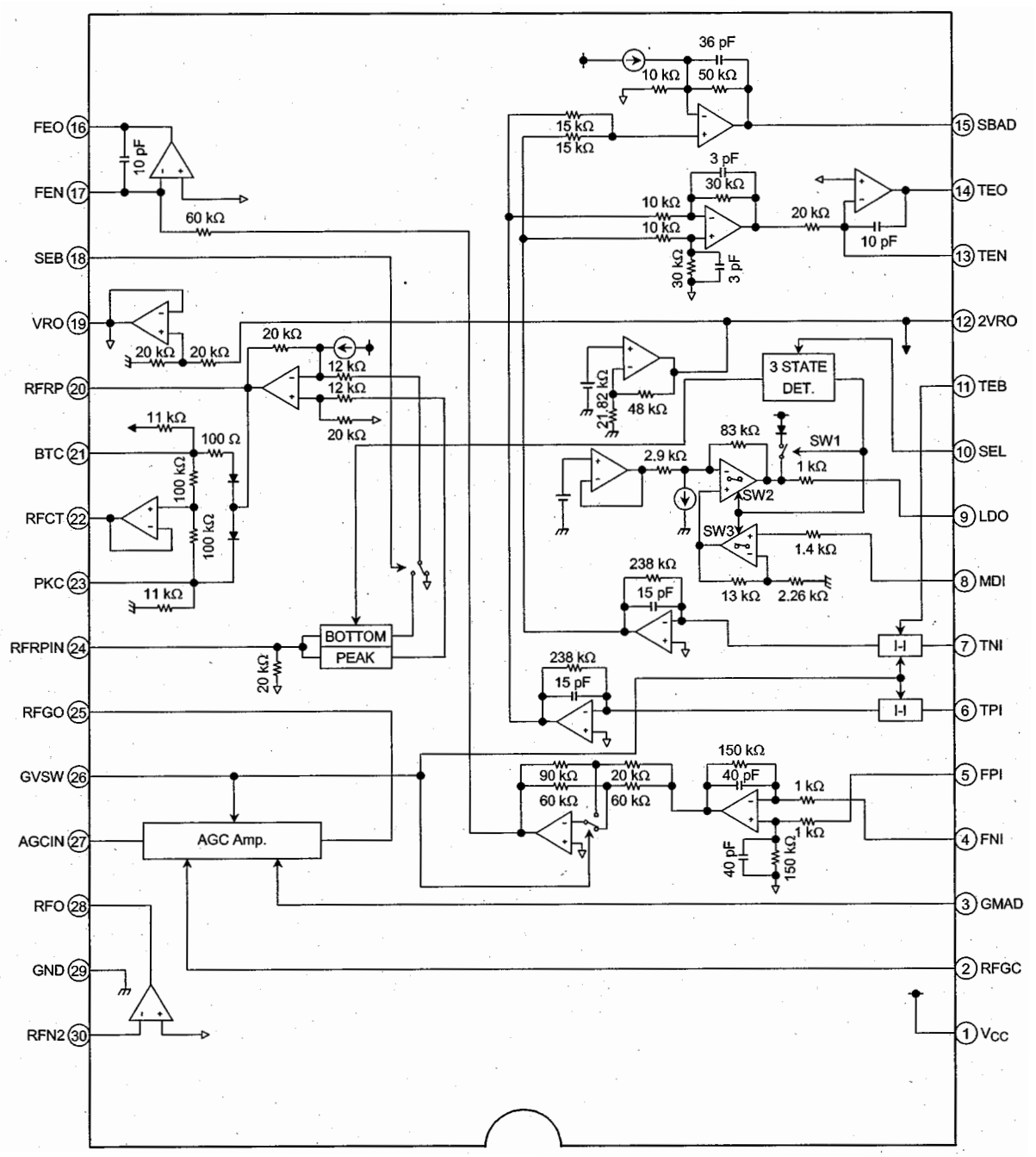
OTHERS

Pin No.	Pin Name	I/O	Description
9, 14, 24, 55 82, 92, 97, 125	Vccint		2.5V
1, 35, 36, 53, 70 71, 90, 107, 108 127,144	Vccco		3.3V
8, 17, 19, 25, 33 45, 52, 61, 73, 81 87, 98, 110, 135 143	GND		GND

■ TA2153FN (MAIN ASSY : IC1003, IC1010)

• **RF Amp IC**

● Block Diagram



● Pin Function (1/2)

<table>
<tr><th>Pin No.</th><th>Symbol</th><th>I/O</th><th>Function Description</th><th>Remarks</th></tr>
<tr><td>1</td><td>V_{CC}</td><td>—</td><td>Power supply input terminal.</td><td>—</td></tr>
<tr><td>2</td><td>RFGC</td><td>I</td><td>RF amplitude adjustment control signal input terminal.
Controlled by 3-PWM signals.
(PWM carrier = 88.2 kHz)</td><td>3 signals input.
(2VRO, VRO, GND)</td></tr>
<tr><td>3</td><td>GMAD</td><td>I</td><td>Open loop gain adjustment terminal for AGC amp.</td><td>(Note1)</td></tr>
<tr><td>4</td><td>FNI</td><td>I</td><td>Main beam I-V amp input terminal.</td><td>Connected to pin diode output B + D (through resistor).</td></tr>
<tr><td>5</td><td>FPI</td><td>I</td><td>Main beam I-V amp input terminal.</td><td>Connected to pin diode output A + C (through resistor).</td></tr>
<tr><td>6</td><td>TPI</td><td>I</td><td>Sub beam I-V amp input terminal.</td><td>Connected to pin diode output F.</td></tr>
<tr><td>7</td><td>TNI</td><td>I</td><td>Sub beam I-V amp input terminal.</td><td>Connected to pin diode output E.</td></tr>
<tr><td>8</td><td>MDI</td><td>I</td><td>Monitor photo diode amp input terminal.</td><td>Connected to monitor photo diode.</td></tr>
<tr><td>9</td><td>LDO</td><td>O</td><td>Laser diode amp input terminal.</td><td>Connected to laser diode control circuit.</td></tr>
<tr><td>10</td><td>SEL</td><td>I</td><td>Laser diode control signal input terminal and APC circuit ON/OFF control signal terminal.
<table>
<tr><th>SEL Level</th><th>APC Circuit</th><th>LDO</th><th>Detect Frequency</th></tr>
<tr><td>GND</td><td>OFF</td><td>Connected to V_{CC} through resister (1 kΩ)</td><td>Low</td></tr>
<tr><td>HiZ</td><td>ON</td><td>Control signal output</td><td>Low</td></tr>
<tr><td>V_{CC}</td><td>ON</td><td>Control signal output</td><td>High</td></tr>
</table></td><td>3 signals input.
(V_{CC}, HiZ, GND)</td></tr>
<tr><td>11</td><td>TEB</td><td>I</td><td>Tracking error balance adjustment signal input terminal.
Controlled by 3-PWM signal.
(PWM carrier = 88.2 kHz)</td><td>3 signals input.
(2VRO, VRO, GND)</td></tr>
<tr><td>12</td><td>2VRO</td><td>O</td><td>Reference voltage (2VRO) output terminal.
2VRO = 4.2 V when V_{CC} = 5 V</td><td>—</td></tr>
<tr><td>13</td><td>TEN</td><td>I</td><td>TE amp negative input terminal.</td><td>Connected to TEO through feedback resistor.</td></tr>
<tr><td>14</td><td>TEO</td><td>O</td><td>TE error signal output terminal.</td><td>—</td></tr>
<tr><td>15</td><td>SBAD</td><td>O</td><td>Sub beam adder signal output terminal.</td><td>—</td></tr>
<tr><td>16</td><td>FEO</td><td>O</td><td>Focus error signal output terminal.</td><td>—</td></tr>
<tr><td>17</td><td>FEN</td><td>I</td><td>FE amp negative input terminal.</td><td>Connected to FEO through feedback resistor.</td></tr>
<tr><td>18</td><td>SEB</td><td>I</td><td>RFRP output circuit switching terminal.
<table>
<tr><th>SEB Level</th><th>Bottom Detection</th><th>Peak Detection</th></tr>
<tr><td>GND</td><td>ON</td><td>ON</td></tr>
<tr><td>V_{CC}</td><td>OFF</td><td>ON</td></tr>
</table></td><td>Low (GND) is for normal use.</td></tr>
<tr><td>19</td><td>VRO</td><td>O</td><td>Reference signal (VRO) output terminal.
VRO = 2.1 V when V_{CC} = 5 V</td><td>—</td></tr>
<tr><td>20</td><td>RFRP</td><td>O</td><td>Track count signal output terminal.</td><td>—</td></tr>
<tr><td>21</td><td>BTC</td><td>I</td><td>Time constant adjustment terminal for bottom detection.</td><td>Adjusted by capacitance.</td></tr>
</table>

● Pin Function (2/2)

<table>
<tr><th>Pin No.</th><th>Symbol</th><th>I/O</th><th>Function Description</th><th>Remarks</th></tr>
<tr><td>22</td><td>RFCT</td><td>O</td><td>RFRP signal center level output terminal.</td><td>—</td></tr>
<tr><td>23</td><td>PKC</td><td>I</td><td>Time constant adjustment terminal for peak detection.</td><td>Adjusted by capacitance.</td></tr>
<tr><td>24</td><td>RFRPIN</td><td>I</td><td>Input terminal for track count signal output amp.</td><td>—</td></tr>
<tr><td>25</td><td>RFGO</td><td>O</td><td>Output terminal for RF signal amplitude adjustment amp.</td><td>—</td></tr>
<tr><td>26</td><td>GVSW</td><td>I</td><td>Amp (AGC, FE, TE) gain switching terminal.
<table><tr><th>GVSW</th><th>Mode</th></tr><tr><td>GND</td><td>CD-RW</td></tr><tr><td>HiZ</td><td>Normal</td></tr><tr><td>V_{CC}</td><td>Normal</td></tr></table></td><td>Low (GND) is for 5 times gain.</td></tr>
<tr><td>27</td><td>AGCIN</td><td>I</td><td>Input terminal for RF signal amplitude adjustment amp.</td><td>Connected to RFO through capacitance.</td></tr>
<tr><td>28</td><td>RFO</td><td>O</td><td>Output terminal RF signal amp.</td><td>—</td></tr>
<tr><td>29</td><td>GND</td><td>—</td><td>Ground terminal.</td><td>—</td></tr>
<tr><td>30</td><td>RFN2</td><td>I</td><td>Input terminal for RF signal amp.</td><td>Connected to pin-diode output A + B + C + D (through resistor).</td></tr>
</table>

Note1: Pin3 (GMAD) is gm adjustment terminal for AGC amp by applying a voltage (between 1.5 V and 4.2 V).
If pin3 (GMAD) is open, voltage of this terminal is fixed VR by IC interior.
Characteristic of frequency (open-loop characteristic) and voltage is as below.

■ PD5764A (CNTB ASSY : IC501)

• Micro computer (Master CPU)

● Pin Function

Pin No	Pin Name	I/O	Discription	Pin No	Pin Name	I/O	Discription
1	KEY5	I	Key Input	51	S22	O	FL Disply Segment 1: Light up
2	KEY4	I	Key Input	52	S21	O	FL Disply Segment 1: Light up
3	KEY3	I	Key Input	53	S20	O	FL Disply Segment 1: Light up
4	KEY2	I	Key Input	54	S19	O	FL Disply Segment 1: Light up
5	KEY1	I	Key Input	55	S18	O	FL Disply Segment 1: Light up
6	KEY0	I	Key Input	56	S17	O	FL Disply Segment 1: Light up
7	LED7	O	BPM SYNC 1: Light up	57	S16	O	FL Disply Segment 1: Light up
8	LED6	O	RELAY PLAY 1: Light up	58	S15	O	FL Disply Segment 1: Light up
9	NC	O	-	59	S14	O	FL Disply Segment 1: Light up
10	LED4	O	PLAY/ PAUSE 1: Light up	60	S13	O	FL Disply Segment 1: Light up
11	LED3	O	CUE 1: Light up	61	S12	O	FL Disply Segment 1: Light up
12	LED2	O	IN/ REALTIME CUE 1: Light up	62	S11	O	FL Disply Segment 1: Light up
13	LED1	O	OUT/ OUT ADJAST 1: Light up	63	S10	O	FL Disply Segment 1: Light up
14	LED0	O	MT 1: Light up	64	S9	O	FL Disply Segment 1: Light up
15	NC	O	-	65	S8	O	FL Disply Segment 1: Light up
16	NC	O	-	66	S7	O	FL Disply Segment 1: Light up
17	CNVss	-		67	S6	O	FL Disply Segment 1: Light up
18	XRESET	I		68	S5	O	FL Disply Segment 1: Light up
19	NC	O	-	69	S4	O	FL Disply Segment 1: Light up
20	NC	O	-	70	S3	O	FL Disply Segment 1: Light up
21	GND	-	GND	71	S2	O	FL Disply Segment 1: Light up
22	XIN	I	4MHz	72	S1	O	FL Disply Segment 1: Light up
23	XOUT	O	4MHz	73	NC	O	-
24	Vcc	-	+5V	74	NC	O	-
25	LED15	O	HOT REC : A 1: Light up	75	NC	O	-
26	LED14	O	HOT CUE1 : A 1: Light up	76	G9	O	FL Disply Grid 1: Light up
27	LED13	O	HOT CUE2 : A 1: Light up	77	G1	O	FL Disply Grid 1: Light up
28	LED12	O	HOT CUE3 : A 1: Light up	78	G12	O	FL Disply Grid 1: Light up
29	LED11	O	HOT REC : B 1: Light up	79	G13	O	FL Disply Grid 1: Light up
30	LED10	O	HOT CUE1 : B 1: Light up	80	G8	O	FL Disply Grid 1: Light up
31	LED9	O	HOT CUE2 : B 1: Light up	81	G10	O	FL Disply Grid 1: Light up
32	LED8	O	HOT CUE3 : B 1: Light up	82	G11	O	FL Disply Grid 1: Light up
33	XUNIT	I	-	83	G2	O	FL Disply Grid 1: Light up
34	XSTEP	I	-	84	G3	O	FL Disply Grid 1: Light up
35	TxD	O	Communication with a main part.	85	G4	O	FL Disply Grid 1: Light up
36	RxD	I	Communication with a main part.	86	G5	O	FL Disply Grid 1: Light up
37	S36	O	FL Disply Segment 1: Light up	87	G6	O	FL Disply Grid 1: Light up
38	S35	O	FL Disply Segment 1: Light up	88	G7	O	FL Disply Grid 1: Light up
39	S34	O	FL Disply Segment 1: Light up	89	VLOAD	-	VLOAD
40	S33	O	FL Disply Segment 1: Light up	90	SINE1	I	Automatic transmission Input.
41	S32	O	FL Disply Segment 1: Light up	91	SOUT1	O	Automatic transmission Output.
42	S31	O	FL Disply Segment 1: Light up	92	SCLK11	I	Automatic transmission Clock.
43	S30	O	FL Disply Segment 1: Light up	93	TYPE M/XS	I	High: Master CPU Mode.
44	S29	O	FL Disply Segment 1: Light up	94	SBUSY1	I	Automatic transmission control line
45	S28	O	FL Disply Segment 1: Light up	95	XSRDY1	O	Automatic transmission control line.
46	S27	O	FL Disply Segment 1: Light up	96	XRESET_S	O	Slave CPU Reset output 0: Reset
47	S26	O	FL Disply Segment 1: Light up	97	AGND	-	GND
48	S25	O	FL Disply Segment 1: Light up	98	AVREF	-	+5V
49	S24	O	FL Disply Segment 1: Light up	99	TEMPO_REF	I	TEMPO Slider Input.
50	S23	O	FL Disply Segment 1: Light up	100	TEMPO	I	TEMPO Slider Input.

■ PD5764A (CNTA ASSY : IC301)

• Micro computer (Slave CPU)

● Pin Function

Pin No	Pin Name	I/O	Discription	Pin No	Pin Name	I/O	Discription
1	NC	O	-	51	S22	O	FL Disply Segment 1: Light up
2	NC	O	-	52	S21	O	FL Disply Segment 1: Light up
3	NC	O	-	53	S20	O	FL Disply Segment 1: Light up
4	NC	O	-	54	S19	O	FL Disply Segment 1: Light up
5	KEY1	I	-	55	S18	O	FL Disply Segment 1: Light up
6	KEY0	I	-	56	S17	O	FL Disply Segment 1: Light up
7	NC	O	-	57	S16	O	FL Disply Segment 1: Light up
8	NC	O	-	58	S15	O	FL Disply Segment 1: Light up
9	NC	O	-	59	S14	O	FL Disply Segment 1: Light up
10	LED4	O	PLAY/ PAUSE 1: Light up	60	S13	O	FL Disply Segment 1: Light up
11	LED3	O	CUE 1: Light up	61	S12	O	FL Disply Segment 1: Light up
12	LED2	O	IN/ REALTIME CUE 1: Light up	62	S11	O	FL Disply Segment 1: Light up
13	LED1	O	OUT/ OUT ADJAST 1: Light up	63	S10	O	FL Disply Segment 1: Light up
14	LED0	O	MT 1: Light up	64	S9	O	FL Disply Segment 1: Light up
15	JOG1A	I	A PLAYER JOG Input	65	S8	O	FL Disply Segment 1: Light up
16	JOG1B	I	B PLAYER JOG Input	66	S7	O	FL Disply Segment 1: Light up
17	CNVss	-	-	67	S6	O	FL Disply Segment 1: Light up
18	XRESET	I	-	68	S5	O	FL Disply Segment 1: Light up
19	JOG0A	I	A PLAYER JOG Input	69	S4	O	FL Disply Segment 1: Light up
20	JOG0B	I	B PLAYER JOG Input	70	S3	O	FL Disply Segment 1: Light up
21	GND	-	-	71	S2	O	FL Disply Segment 1: Light up
22	XIN	I	4MHz	72	S1	O	FL Disply Segment 1: Light up
23	XOUT	O	4MHz	73	NC	O	-
24	Vcc	-	+5V	74	NC	O	-
25	NC	O	-	75	NC	O	-
26	NC	O	-	76	G9	O	FL Disply Grid 1: Light up
27	NC	O	-	77	G1	O	FL Disply Grid 1: Light up
28	NC	O	-	78	G12	O	FL Disply Grid 1: Light up
29	INT3	I	B PLAYER JOG Trailing edge.	79	G13	O	FL Disply Grid 1: Light up
30	INT2	I	B PLAYER JOG leading edge.	80	G8	O	FL Disply Grid 1: Light up
31	INT1	I	A PLAYER JOG Trailing edge.	81	G10	O	FL Disply Grid 1: Light up
32	INT0	I	A PLAYER JOG leading edge.	82	G11	O	FL Disply Grid 1: Light up
33	NC	I	-	83	G2	O	FL Disply Grid 1: Light up
34	NC	I	-	84	G3	O	FL Disply Grid 1: Light up
35	NC	O	-	85	G4	O	FL Disply Grid 1: Light up
36	NC	I	-	86	G5	O	FL Disply Grid 1: Light up
37	S36	O	FL Disply Segment 1: Light up	87	G6	O	FL Disply Grid 1: Light up
38	S35	O	FL Disply Segment 1: Light up	88	G7	O	FL Disply Grid 1: Light up
39	S34	O	FL Disply Segment 1: Light up	89	VLOAD	-	VLOAD
40	S33	O	FL Disply Segment 1: Light up	90	SINE1	I	Automatic transmission Input.
41	S32	O	FL Disply Segment 1: Light up	91	SOUT1	O	Automatic transmission Output.
42	S31	O	FL Disply Segment 1: Light up	92	SCLK11	O	Automatic transmission Clock.
43	S30	O	FL Disply Segment 1: Light up	93	TYPE M/XS	I	High: Master CPU Mode
44	S29	O	FL Disply Segment 1: Light up	94	SBUSY1	O	Automatic transmission control line.
45	S28	O	FL Disply Segment 1: Light up	95	XSRDY1	I	Automatic transmission control line.
46	S27	O	FL Disply Segment 1: Light up	96	NC	O	-
47	S26	O	FL Disply Segment 1: Light up	97	AGND	-	GND
48	S25	O	FL Disply Segment 1: Light up	98	AVREF	-	+5V
49	S24	O	FL Disply Segment 1: Light up	99	TEMPO_REF	I	TEMPO Slider Input.
50	S23	O	FL Disply Segment 1: Light up	100	TEMPO	I	TEMPO Slider Input.

■ HD6417709AF100B (MAIN ASSY : IC1204)

• Micro computer

● Pin Function (1/4)

Pin No.	Port Name	Pin Name	I/O	Function
1	MD1	MD1	I	Pull up Clock mode setting
2	MD2	MD2	I	Pull down Clock mode setting
3	Vcc-RTC	Vcc-RTC	–	Power supply (1.8V) for RTC
4	XTAL2	XTAL2	O	NC Crystal resonator for internal RTC
5	EXTAL2	EXTAL2	I	Pull down Crystal resonator for internal RTC
6	Vss-RTC	Vss-RTC	–	Power supply (0V) for RTC
7	NMI	NMI	I	Pull down Non-maskable interrupt request
8	IRQ0/ IRL0/ PTH [0]	ZDET B	IN: pull-up	TC9495F zero detecting flag B (H for soundlessness)
9	IRQ0/ IRL0/ PTH [1]	ZDET A	IN: pull-up	TC9495F zero detecting flag B (H for soundlessness)
10	IRQ0/ IRL0/ PTH [2]	XZERO B	IN: pull-up	DAC zero detecting flag B (L for soundlessness)
11	IRQ0/ IRL0/ PTH [3]	XZERO A	IN: pull-up	DAC zero detecting flag A (L for soundlessness)
12	IRQ4/ PTH [4]	NC	(IN: pull-up)	
13	D31/ PTB [7]	BUSDR B	OUT: high	TC9495F I/F bus direction specification B (H: CPU to TC9495F)
14	D30/ PTB [6]	NC	OUT: high	
15	D29/ PTB [5]	NC	OUT: high	
16	D28/ PTB [4]	NC	OUT: high	
17	D27/ PTB [3]	XMR CHECK	OUT: high	
18	D26/ PTB [2]	XMR NG	OUT: high	
19	VssQ	VssQ	–	Power supply (0V) for I/O
20	D25/ PTB [1]	NC	OUT: high	
21	VccQ	VccQ	–	Power supply (3.3V) for I/O
22	D24/ PTB [0]	NC	OUT: high	
23	D23/ PTB [7]	NC	OUT: high	
24	D22/ PTB [6]	NC	OUT: high	
25	D21/ PTB [5]	NC	OUT: high	
26	D20/ PTB [4]	NC	OUT: high	
27	Vss	Vss	–	Power supply (0V)
28	D19/ PTA [3]	NC	OUT: high	
29	Vcc	Vcc	–	Power supply (1.8V)
30	D18/ PTA [2]	NC	OUT: high	
31	D17/ PTA [1]	NC	OUT: high	
32	D16/ PTA [0]	NC	OUT: high	
33	VssQ	VssQ	–	Power supply (0V) for I/O
34	D15	D15	Z	Data bus
35	VccQ	VccQ	–	Power supply (3.3V) for I/O
36	D14	D14	Z	Data bus
37	D13	D13	Z	Data bus
38	D12	D12	Z	Data bus
39	D11	D11	Z	Data bus
40	D10	D10	Z	Data bus
41	D9	D9	Z	Data bus
42	D8	D8	Z	Data bus
43	D7	D7	Z	Data bus
44	D6	D6	Z	Data bus
45	VssQ	VssQ	–	Power supply (0V) for I/O
46	D5	D5	Z	Data bus
47	VccQ	VccQ	–	Power supply (3.3V) for I/O
48	D4	D4	Z	Data bus
49	D3	D3	Z	Data bus
50	D2	D2	Z	Data bus
51	D1	D1	Z	Data bus
52	D0	D0	Z	Data bus

● Pin Function (2/4)

Pin No.	Port Name	Pin Name	I/O	Function
53	A0	A0	O	Address bus
54	A1	A1	O	Address bus
55	A2	A2	O	Address bus
56	A3	A3	O	Address bus
57	VssQ	VssQ	–	Power supply (0V) for I/O
58	A4	A4	O	Address bus
59	VccQ	VccQ	–	Power supply (3.3V) for I/O
60	A5	A5	O	Address bus
61	A6	A6	O	Address bus
62	A7	A7	O	Address bus
63	A8	A8	O	Address bus
64	A9	A9	O	Address bus
65	A10	A10	O	Address bus
66	A11	A11	O	Address bus
67	A12	A12	O	Address bus
68	A13	A13	O	Address bus
69	VssQ	VssQ	–	Power supply (0V) for I/O
70	A14	A14	O	Address bus
71	VccQ	VccQ	–	Power supply (3.3V) for I/O
72	A15	A15	O	Address bus
73	A16	A16	O	Address bus
74	A17	A17	O	Address bus
75	A18	A18	O	Address bus
76	A19	A19	O	Address bus
77	A20	A20	O	Address bus
78	A21	A21	O	Address bus
79	Vss	Vss	–	Power supply (0V)
80	A22	A22	O	Address bus
81	Vcc	Vcc	–	Power supply (1.8V)
82	A23	A23	O	Address bus
83	VssQ	VssQ	–	Power supply (0V) for I/O
84	A24	A24	O	Address bus
85	VccQ	VccQ	–	Power supply (3.3V) for I/O
86	A25	A25	O	Address bus
87	XBS/PTK [4]	NC	(OUT:high)	
88	XRD	XRD	O	Read strobe
89	XWE0/ DQMLL	XWE0/DQMLL	O	Write strobe
90	XWE1/ DQMLU/WE	XWE1/ DQMLU	O	Write strobe
91	XWE2/ DQMUL/ ICIORD/ PTK [6]	XWE2	O	NC
92	XWE3/ DQMUL/ ICIORD/ PTK [7]	XWE3	O	NC
93	RDXWR	RDWR	O	Read / Write
94	XAUDSYNC/ PTE [7]	AUDSYNC	OTHER	
95	VssQ	VssQ	–	Power supply (0V) for I/O
96	XCS0/ MCS [0]	CS0	O	Chip select 0 (for FLASH)
97	VccQ	VccQ	–	Power supply (3.3V) for I/O
98	XCS2/ PTK [0]	CS2	O	Chip select 2 (for FPGA)
99	XCS3/ PTK [1]	CS3	O	Chip select 3 (for SDRAM)
100	XCS4/ PTK [2]	CS4	O	Chip select 4 (for DSP)
101	XCS5/ CE1A/ PTK [3]	CS5	O	Chip select 5 (connect to FPGA)
102	XCS6/ CE1B	CS6	O	NC
103	XCE2A/ PTE [4]	LOADOUT B	OUT:high	Loading motor control B (Eject direction moves with Low)
104	XCE2B/ PTE [5]	LOADIN B	OUT:high	Loading motor control B (Lead-in direction moves with Low)

● Pin Function (3/4)

Pin No	Port Name	Pin Name	I/O	Function
105	CKE/ PTK [5]	CKE	O	CK enable (SDRAM)
106	XRAS3L/PTJ [0]	RAS3L	O	RAS3L (SDRAM)
107	XRAS2L/PTJ [1]	DSPRST	OUT: high	Reset output for DSP (H: reset)
108	XCASLL/ XCASL/ PTJ [2]	CASL	O	CASL (SDRAM)
109	VssQ	VssQ	–	Power supply (0V) for I/O
110	XCASLH/ XCASU/ PTJ [3]	FPGARST	OUT: high	Reset output for FPGA (H: reset)
111	VccQ	VccQ	–	Power supply (3.3V) for I/O
112	XCASHL/ PTJ [4]	CDRST B	OUT: high	TC9495F reset B (H: reset)
113	XCASHH/ PTJ [5]	CDRST A	OUT: high	TC9495F reset A (H: reset)
114	XDACK0/ PTD [5]	DACK0	O	FPGA DMA acknowledge 0
115	XDACK1/ PTD [7]	DACK1	O	FPGA DMA acknowledge 1
116	XCAS2L/ PTE [6]	LOADIN A	OUT: high	Loading motor control A (Lead-in direction moves with Low)
117	XCAS2H/ PTE [3]	LOADOUT A	OUT: high	Loading motor control A (Eject direction moves with Low)
118	XRAS3U/ PTE [2]	MUTE B	OUT: high	Audio output stage mute B (H: mute ON)
119	XRAS3U/ PTE [1]	MUTE A	OUT: high	Audio output stage mute A (H: mute ON)
120	TDO/ PTE [0]	TDO	OTHER	–
121	XBACK	BACK	O	NC
122	XBREQ	BREQ	I	Pull up
123	XWAIT	WAIT	I	Pull up
124	XRESETM	RESETM	I	Pull up
125	XADTRG/ PTH [5]	FPGA DONE	IN: pull-up	DONE for FPGA configulation
126	XIOIS16/ PTG [7]	RY/ XBY	IN: pull-up	Connect to flash ROM
127	XASEMD0/ PTG [6]	ASEMD0	OTHER	–
128	XASEBRKAK/ PTG [5]	ASEBRKAK	OTHER	–
129	PTG [4]	FPGA XINIT	IN: pull-up	INIT for FPGA configulation
130	AUDATA [3]/ PTG [3]	AUDATA [3]	OTHER	–
131	AUDATA [2]/ PTG [2]	AUDATA [3]	OTHER	–
132	Vss	Vss	–	Power supply (0V)
133	AUDATA [1]/ PTG [1]	AUDATA [1]	OTHER	–
134	Vcc	Vcc	–	Power supply (1.8V)
135	AUDATA [0]/ PTG [0]	AUDATA [0]	OTHER	–
136	XTRST/ PTF [7]/ PINT [15]	TRST	OTHER	–
137	TMS/ PTE [6]/ PINT [14]	TMS	OTHER	–
138	TDI/ PTE [5]/ PINT [13]	TDI	OTHER	–
139	TCK/ PTF [4]/ PNT [12]	TCK	OTHER	–
140	XIRLS [3]/ PTF [3]/ PINT [11]	LPS1 A	IN: pull-up	Loading switch A (switch ON: Low)
141	XIRLS [2]/ PTF [2]/ PINT [10]	LPS2 A	IN: pull-up	Loading switch A (switch ON: Low)
142	XIRLS [1]/ PTF [1]/ PINT [9]	LPS1 B	IN: pull-up	Loading switch B (switch ON: Low)
143	XIRLS [0]/ PTF [0]/ PINT [8]	LPS2 B	IN: pull-up	Loading switch B (switch ON: Low)
144	MD0	MD0	I	Pull down Clock mode setting
145	Vcc-PLL1	Vcc-PLL1	–	Power supply (1.8V) for PLL1
146	CAP1	CAP1	–	C External capacitance pin for PLL1
147	Vss-PLL1	Vss-PLL1	–	Power supply (0V) for PLL1
148	Vss-PLL2	Vss-PLL2	–	Power supply (0V) for PLL2
149	CAP2	CAP2	–	C External capacitance pin for PLL2
150	Vcc-PLL2	Vcc-PLL2	–	Power supply (1.8V) for PLL2
151	AUDCK/ PTH [6]	AUDCK	OTHER	–
152	Vss	Vss	–	Power supply (0V)
153	Vss	Vss	–	Power supply (0V)
154	Vcc	Vcc	–	Power supply (1.8V)
155	XTAL	XTAL	O	12MHz ceramic resonator
156	EXTAL	EXTAL	I	12MHz ceramic resonator

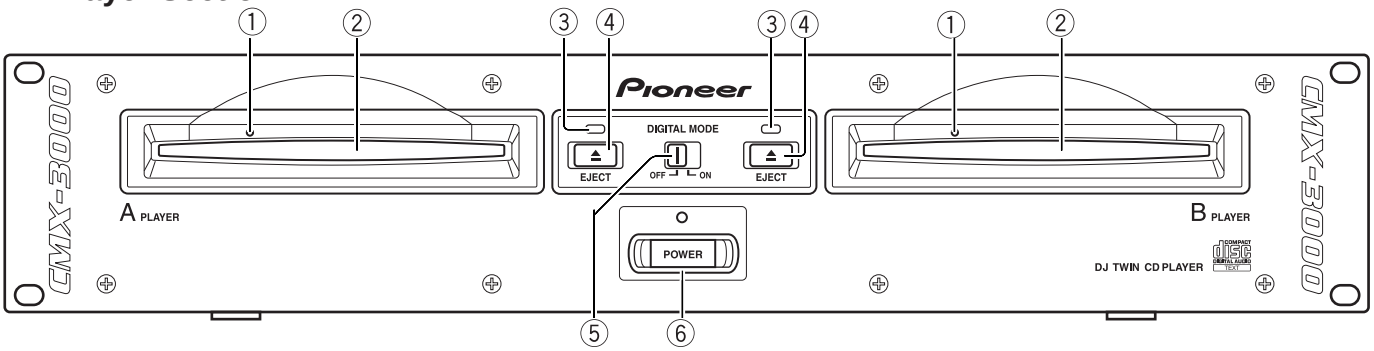
● Pin Function (4/4)

Pin No	Port Name	Pin Name	I/O	Function
157	STATUS0/ PTJ [6]	DAC ML B	OUT: high	LATCH B for DAC
158	STATUS0/ PTJ [7]	DAC ML A	OUT: high	LATCH A for DAC
159	TCLK/ PTH [7]	FPGA XPRG	OUT: high	PRG for FPGA configulation
160	XIRQOUT	NC	O	
161	VssQ	VssQ	–	Power supply (0V) for I/O
162	CKIO	CKIO	O	Clock output (48MHz) to FPGA and DSP
163	VccQ	VccQ	–	Power supply (3.3V) for I/O
164	TxD0/ SCPT [0]	DAC MD	O	Serial data / FPGA configulation for DAC
165	SOK0/ SCPT [1]	DAC MC	O	Serial clock / FPGA configulation for DAC
166	TxD1/ SCPT [2]	TXD1	OUT: high	DATA IN/ OUT communication output
167	SCK1/ SCPT [3]	BUSDR b	OUT:high	TC9495F I/F bus direction specification A (H: CPU to TC9495F)
168	TxD2/ SCPT [4]	TxD2	O	Serial communication output with the function section
169	SCK2/ SCPT [5]	DRVMUTE B	OUT:high	Loading driver IC mute B (H: mute ON)
170	SCK2/ SCPT [6]	DRVMUTE A	OUT:high	Loading driver IC mute A (H: mute ON)
171	RxD0/ SCPT [0]	NC	(IN: pull-up)	
172	RxD1/ SCPT [2]	RxD1	I	DATA IN/OUT Remote control unit communication input for service
173	Vss	Vss	–	Power supply (0V)
174	RxD2/ SCPT [4]	RxD2	I	Serial communication input with the function section
175	Vcc	Vcc	–	Power supply (1.8V)
176	CTS2/ IRQ5/ SCPT [7]	NC	(IN: pull-up)	
177	MCS [7]/ PTC [7]/ PINT [7]	XCDCE A	OUT: high	TC9495F chip enable signal A
178	MCS [6]/ PTC [6]/ PINT [6]	BUCK A	OUT: high	TC9495F microcomputer I/F clock signal A
179	MCS [5]/ PTC [5]/ PINT [5]	XCDCE B	OUT: high	TC9495F chip enable signal B
180	MCS [4]/ PTC [4]/ PINT [4]	BUCK B	OUT: high	TC9495F microcomputer I/F clock signal B
181	VssQ	VssQ	–	Power supply (0V) for I/O
182	XWAKEUP/ PTD [3]	BUS3 A	IN(Bidirection)	TC9495F microcomputer I/F data 3A
183	VccQ	VccQ	–	Power supply (3.3V) for I/O
184	XRESETOUT/ PTD [2]	BUS2 A	IN(Bidirection)	TC9495F microcomputer I/F data 2A
185	MCS [3]/ PTC [3]/ PINT [3]	BUS3 B	IN(Bidirection)	TC9495F microcomputer I/F data 3B
186	MCS [2]/ PTC [2]/ PINT [2]	BUS2 B	IN(Bidirection)	TC9495F microcomputer I/F data 2B
187	MCS [1]/ PTC [1]/ PINT [1]	BUS1 B	IN(Bidirection)	TC9495F microcomputer I/F data 1B
188	MCS [0]/ PTC [0]/ PINT [0]	BUS0 B	IN(Bidirection)	TC9495F microcomputer I/F data 0B
189	DRAK0/ PTD [1]	BUS1 A	IN(Bidirection)	TC9495F microcomputer I/F data 1A
190	DRAK1/ PTD [0]	BUS0 A	IN(Bidirection)	TC9495F microcomputer I/F data 0A
191	XDREQ0/ PTD [4]	DREQ0	I	FPGA DMA data request 0
192	XDREQ0/ PTD [6]	DREQ1	I	FPGA DMA data request 1
193	XRESETP	XRESET	I	Reset input
194	CA	CA	I	Pull up
195	MD3	MD3	I	Pull down Bus width setting for area 0
196	MD4	MD4	I	Pull up Bus width setting for area 0
197	MD5	MD5	I	Pull up Endure setting
198	AVss	AVss	–	Analog power supply (0V)
199	AN [0]/ PTL [0]	CDINSIDE B	IN: pull-up	Pickup inside SW B (switch ON: Low)
200	AN [1]/ PTL [1]	CDINSIDE A	IN: pull-up	Pickup inside SW A (switch ON: Low)
201	AN [2]/ PTL [2]	EJECT SW B	IN: pull-up	EJECT SW B (switch ON: Low)
202	AN [3]/ PTL [3]	EJECT SW A	IN: pull-up	EJECT SW A (switch ON: Low)
203	AN [4]/ PTL [4]	D MODE SW	IN: pull-up	DIGITAL MODE switching SW (DIGITAL ON: Low)
204	AN [5]/ PTL [5]	REMIN	(IN: pull-up)	DATA IN/ OUT insertion detecting pin (Jack insertion: High)
205	AVcc (3.3V)	AVcc (3.3V)	–	Analog power supply (3.3V)
206	AN [6]/ DA [1]/ PTL [6]	XUNIT	IN: pull-up	–
207	AN [7]/ DA [0]/ PTL [7]	NC	(IN: pull-up)	–
208	AVss	AVss	–	Analog power supply (0V)

8. PANEL FACILITIES AND SPECIFICATIONS

8.1 PANEL FACILITIES

■ Player Section



① **Manual ejection hole**

② **Disc insertion slot**
When using 3 inch/8 cm discs, discs must be inserted in the commercially available CD adapter before insertion.

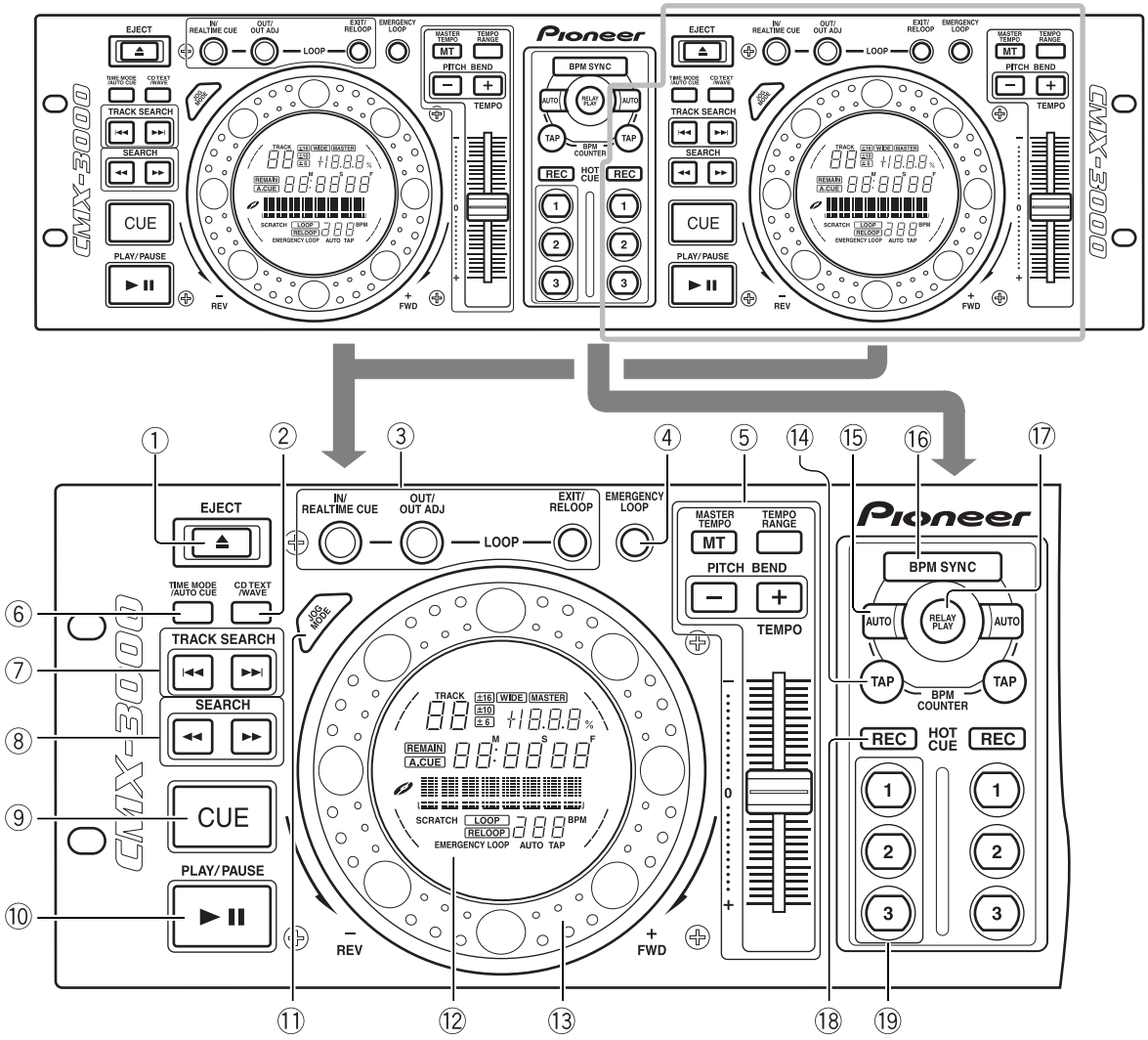
③ **Disc loading indicator**
This indicator flashes when a disc is being inserted into or ejected from the disc insertion slot and lights up when a disc has been inserted.

④ **EJECT button (⏏)**
Pressing this button while cueing is on standby or play is paused will eject the disc from the player.

⑤ **DIGITAL MODE switch**
Set to On when the digital output is to be used. When set to On, the DJ functions do not function. (Functions marked * do not operate in this mode.) And the muted pause mode is used instead of the audible pause mode.

⑥ **POWER switch and indicator**

■ Remote Control Unit Section

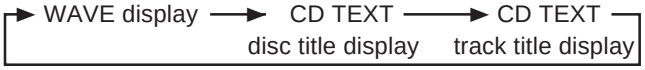


Operation buttons indicated by an asterisk (*) are not supported in digital mode.

① EJECT button (⏏)

② CD TEXT/WAVE button

Each time the button is pressed the function changes alternately as follows:



During digital mode, switches between

CD TEXT ⟷ CD TEXT

disc title display track title display

③ LOOP control buttons (*)

④ EMERGENCY LOOP button (*)

When this button is pressed, the current point is set as the loop in-point, and loop play begins with an automatically set out-point.

⑤ TEMPO controls (*)

Tempo control range button (TEMPO RANGE):

Pressing this button causes the variable range of the tempo control slide to change each time the button is pressed.

MASTER TEMPO button and indicator:

Pressing this button causes the master tempo feature to be powered on or off each time it is pressed.

Tempo control slide:

Moving this slider in the positive (+) direction away from the center position (normal playback tempo) causes the tempo to become faster, and moving it in the negative (–) direction causes the tempo to become slower.

PITCH BEND buttons (+, –):

When pressed during playback, causes pitch bend. Pressing the "+" button causes pitch to accelerate, while pressing the "–" button causes pitch to decelerate.

⑥ Time mode/Auto cueing button (*) (TIME MODE/AUTO CUE)

TIME MODE:

Pressing this button causes the elapsed time and remaining time (REMAIN) of the current track to be displayed in succession on the time display of the display unit.

AUTO CUE:

⑦ TRACK SEARCH button (|◄◄, ►►|)

⑧ SEARCH button (◄◄, ►►)

⑨ CUE button and indicator (*)

Cueing point settings
Cueing point sampler
Back cueing
Cueing point adjust

⑩ PLAY/PAUSE button (► II) and indicator

⑪ JOG MODE button (*)

Each time this button is pressed, the jog mode switches alternately between CDJ jog mode and SCRATCH jog mode.

⑫ Display

⑬ Jog dial (+ FWD/– REV) (*)

⑭ TAP button (*)

When pressed during playback, the BPM counter switches to manual mode, and the BPM value is calculated from the interval at which the TAP button is pressed. A BPM value in the range 40 to 199 BPM (varies with the tempo change rate) can be entered when the tempo change rate is 0%.

⑮ AUTO button (*)

Press for automatic BPM count

⑯ BPM synchro button (BPM SYNC) and indicator (*)

Each time the button is pressed, switches BPM synchro function ON/OFF. BMP SYNC indicator flashes during ON, and lights steadily when OFF.

⑰ RELAY PLAY button and indicator (*)

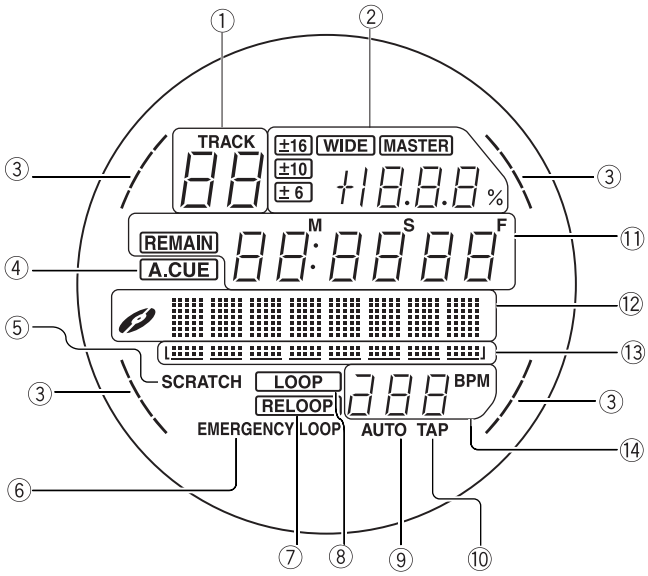
⑱ HOT CUE recording mode button (REC) and indicator (*)

Press to switch the HOT CUE button's function (record/access). In the record mode, the indicator lights.

⑲ HOT CUE buttons (1, 2, 3) and indicator (*)

Use to select the memory (1, 2, 3) into which you wish to program hot cue point information, loop information, and scratch mode information.

■ Display



① TRACK number display
Displays the track number of the track currently being played.

② Playback speed display
Tempo control range display (±6, ±10, ±16, WIDE)
Displays the variable range mode of the tempo control slide.
MASTER indicator
MASTER indicator on the master player lights during BPM synchro play.
Tempo change rate display
Displays the rate of change of the tempo as specified using the tempo control slide.

③ Ring display
During relay play, displays disc rotation status. During BPM synchro mode, the display occurs in rhythm with the beat.

④ Auto cueing indicator (A. CUE)
Lights up when auto cueing is turned on.

⑤ SCRATCH indictor
When jog mode is set to “SCRATCH,” flashes during write to the scratch memory, and lights steadily when data is fully written to the memory.

⑥ EMERGENCY LOOP indicator
Flashes during loop play in the Emergency Loop mode.

⑦ RELOOP indicator
Lights to indicate loop play is possible, and during loop play.

⑧ LOOP indicator
Lights during loop play.

⑨ Automatic BPM Count indicator (AUTO)
Lights during automatic BPM count mode.

⑩ TAP mode indicator
Lights during TAP BPM count mode. Indicator goes out for approximately 0.2 second the instant TAP button is pressed.

⑪ Time display
Used to display the elapsed playback time (when the REMAIN indicator is unlit) or the remaining playback time (when the REMAIN indicator is lit) of the current track in minutes (M), seconds (S), and frames (F).

⑫ WAVE Display / Character Display
During WAVE display, indicates the volume level of the currently playing track. During character display, displays CD TEXT. Characters displayable are limited to alphabet, numerals, and certain symbols. The array displays either the disc title or the track title. When disc title is displayed, the 𝒪 mark lights.

⑬ Playback position display
Used to display a full-scale bar graph for the track being played to make it possible to get an intuitive feel of the elapsed and remaining play time.
- Display as it appears when displaying elapsed time:
  All indicators unlit and then indicators light up in sequence from left
- Display as it appears when displaying remaining time:
  All indicators lit and then indicators are turned off in sequence from left
- Display as it appears when there are less than 30 seconds remaining in a track:
  Slow flashing
- Display as it appears when there are less than 15 seconds remaining in a track:
  Rapid flashing

⑭ BPM display
Used to display the number of BPM for the current track. Note that it may not be possible to count BPM in the automatic BPM count mode for some tracks. Then use the TAP BPM count mode to do this.

8.2 SPECIFICATIONS

■ CMX-3000/KUXJ

1. General

System ..... Compact disc digital audio system
Discs used ..... Compact discs
Power requirements ..... AC 120 V, 60 Hz
Power consumption ..... 49 W
Operating temperature ..... +5˚C to +35˚C (+41°F to +95°F)
Operating humidity ..... 5% to 85%
(There should be no condensation of moisture.)
Weight
Remote controller ..... 2.0 kg (4 lbs 7 oz)
Player ..... 5.6 kg (12 lbs 6 oz)
Dimensions
Remote controller ..... 482 (W) x 132 (D) x 82 (H) mm
18-31/32 (W) x 5-3/16 (D) x 3-7/32 (H) in.
Player ..... 482 (W) x 252 (D) x 90 (H) mm
18-31/32 (W) x 9-15/16 (D) x 3-9/16 (H) in.

2. Audio section

Frequency response ..... 4 Hz to 20 kHz
Signal-to-noise ratio ..... 115 dB or more
Distortion rate 0.006%

3. Accessories

- Operating instructions 1
- Power cord 1
- Audio cable 2
- Control cord 2
- Forced ejection pin 1
- Specialized connection cable for the remote controller 1
- Limited warranty 1

NOTE:
Specifications and design are subject to possible modification without notice.

■ CMX-3000/WYXJ

1. General

System ..... Compact disc digital audio system
Discs used ..... Compact discs
Power requirements ..... AC 220-240 V, 50/60 Hz
Power consumption ..... 49 W
Operating temperature ..... +5˚C to +35˚C
Operating humidity ..... 5% to 85%
(There should be no condensation of moisture.)
Weight
Remote controller ..... 2.0 kg
Player ..... 5.6 kg
Dimensions
Remote controller ..... 482 (W) x 132 (D) x 82 (H) mm
Player ..... 482 (W) x 252 (D) x 90 (H) mm

2. Audio section

Frequency response ..... 4 Hz to 20 kHz
Signal-to-noise ratio ..... 115 dB or more
Distortion rate 0.006%

3. Accessories

- Operating instructions 1
- Power cord 1
- Audio cable 2
- Control cord 2
- Forced ejection pin 1
- Specialized connection cable for the remote controller 1

NOTE:
Specifications and design are subject to possible modification without notice.

■ CMX-3000/RLBXJ

1. General

System ..... Compact disc digital audio system
Discs used ..... Compact discs
Power requirements ..... AC 110-120 V/220-240 V, 50/60 Hz
Power consumption ..... 49 W
Operating temperature ..... +5˚C to +35˚C
Operating humidity ..... 5% to 85%
(There should be no condensation of moisture.)
Weight
Remote controller ..... 2.0 kg
Player ..... 5.6 kg
Dimensions
Remote controller ..... 482 (W) x 132 (D) x 82 (H) mm
Player ..... 482 (W) x 252 (D) x 90 (H) mm

2. Audio section

Frequency response ..... 4 Hz to 20 kHz
Signal-to-noise ratio ..... 115 dB or more
Distortion rate 0.006%

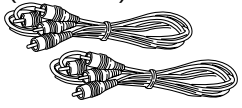
3. Accessories

- Operating instructions 1
- Power cord 1
- Audio cable 2
- Control cord 2
- Forced ejection pin 1
- Specialized connection cable for the remote controller 1

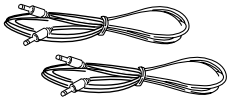
NOTE:
Specifications and design are subject to possible modification without notice.

■ Accessories

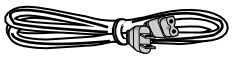
Audio Cable x2
(VDE1064) L=1.5 m



Control Cord x2
(PDE1267) L=1 m



Power Cord x1
(KUXJ type : ADG7022
(WYXJ, TLXJ type: ADG1154)



Forced Ejection Pin x1
(DEX1013)

Specialized connection cable
for the remote controller
(DDE1122) L=3 m x1

Operating instructions

Limited warranty (KUXJ type only)